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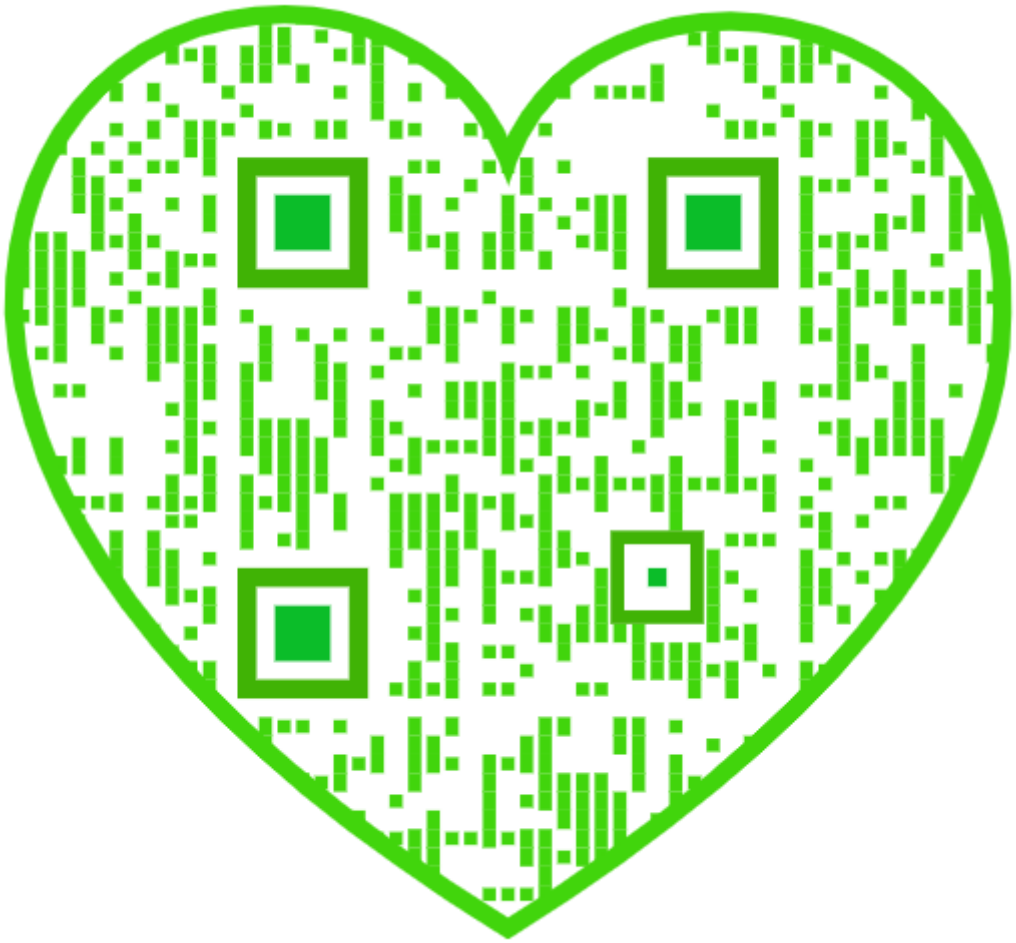

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VOLUME THIRTY.

The unfamiliar heading which appears but once a year at the beginning of a new volume will, no doubt, be seen for the first time by many beginners in bee-keeping, who are now readers of the BRITISH BEE JOURNAL. It also heralds a new year. The year just closed will long be remembered by dwellers in this land as one which brings few recollections other than those of sadness, and this notwithstanding the many blessings vouchsafed to us, for which we ought all to be truly thankful. The Nation's loss in the person of our great and good Queen, and the thousands of homes filled with sad hearts owing to gaps in the family circle through the war, should teach us useful lessons, while adding greatly to the personal sorrows, in a like direction, which come to us in the ordinary course of life.

But in spite of all that the now big family known by the name of Britons has endured—and has still to endure—we seem to go on "pegging away" in the cause of what we deem to be equal justice to all who dwell under the sway of the British Crown. Bearing our reverses as men should, and without any turning back or faltering, neither disheartened by mishaps nor losing any of the "grit" that makes a man "come up smiling" after a knock-down, we go ahead, never doubting that all will come out right in the end.

This may be our assurance, or smug complacency, or anything else objectors please to call it—certainly it is not bee-keeping; but we claim for it the same spirit that makes bee-keepers what they are to-day. Who, we ask, meets with so much of what our American brethren facetiously call "blasted hopes" as does the bee-man of the British Isles? Why, the very weather, on which honey gathering depends, is not weather at all! Nothing—so our friends the critics say—but "samples" of all that is good, bad, and indifferent in that line. But we don't become misanthropes on that account! Not a bit of it! Do we not "keep on hoping"? Of course we do, our idea being that of the old song:—

"Would summer be prized for its fruit and its flowers
If winter ne'er followed with storm, wind, and showers;
And do not the brightest of pleasures appear
Still brighter when chequered by moments of care?"

That is what creates and maintains "enthusiasm" in the true bee-man always.

Some good folks who, as W. S. Gilbert says, "mean well but don't know" would make people believe that bees, when transplanted to lands where perpetual summer reigns, give up work altogether. But bee-keepers only smile at these wise ones; we know that when the sun shines and there is honey about the bee will be up and doing if it is within a mile or so of its hive. Moreover, we who dwell in a land where it is not all sunshine, are content to take our chance while still hoping for the best.

In conclusion, we must express our heartfelt acknowledgments of the good wishes for the new year that come with so many of our daily batch of letters. It is indeed gratifying to receive such kindly remembrances; may they never grow less in number, and always be cordially reciprocated by the BEE JOURNAL'S Editors, whoever they are at the time. One enthusiastic friend writes, "May the old B.B.J. never die." Alas! we fear it will one day go the way of everything earthly, but we hope it will be many years ere it reaches the stage of "senile decay" which is the fate of all things mundane. And when the inexorable hand of Time causes its present Editors to drop into the rear, no doubt young and ardent spirits now among us will be ready to take their place.

A good and prosperous New Year to all is the earnest wish of the EDITORS.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

INSURANCE FOR BEE-KEEPERS.

[From a number of letters—addressed in error to this office instead of to the Secretary B.B.K.A.—we select the following as voicing the opinions of B.J. readers on the question of insurance for bee-keepers.—EDS.]

[4624.] I have read the "supplement" in the B.B.J. of the 26th inst. with reference to the insurance scheme, but note that it does not seem to provide for bee-keepers who do not belong to an association. Of course, if there is an association in the neighbourhood it can be argued that they must join it or fail to participate in the insurance scheme. On the other hand, if there is no association for them to join it is hard lines that the benefits of insurance should be withheld from them.

Might I suggest that we should have an association of *unattached bee-keepers*, whose headquarters would be your office?

I believe a somewhat similar scheme obtains at the headquarters of athletic associations for the preservation of the amateur status of men who wish to compete in sports, but who do not belong to a club.—OLIVER MOURANT, *Undercliff, St. Aubins, Jersey, December* 28.

[The Council of the B.B.K.A. are most anxious that the advantages of the scheme referred to should be extended to all bee-keepers, whether members of county associations or not.—EDS.]

[4625.] I am very glad you have agreed to send out a supplement as to insurance. It will wonderfully help to get the thing started. I will fill up mine as soon as I know whether it would do good or harm to insure for more hives than we have. My number just now is about twelve, my average about fifteen, my ideal twenty-five.

I want also to know what is the lowest sum that small farmers, gardeners, &c., can pay to become members, as I suppose only members can insure. I know two persons of this class that I could, I think, influence, but they cannot do as I do. Could you send two more forms for insurance?

I have long felt a difficulty in finding out when hives are supplied with naphthaline, unless I open the hive. I now make a hole through the lower part of the back of hive, a metal perforated cage to fit it holding just two balls, and a wooden shutter working like a treacle-tap. This I can inspect any time without disturbance, and, if it is desired, I would describe it fully.

Wishing you a happy New Year.—F. V. HADLOW (*a Bee-keeper since C. N. Abbott's time; now seventy-five years old*), *Buxted, Sussex, December* 28.

[4626] I enclose the form issued with the B.B.J. of December 26, and as there is no *active* bee association here I add a line to say I shall be pleased to do all in my power to help the scheme forward. The only risk that strikes me is when people who think they have grounds for compensation know of the insurance, it will be a great temptation to induce them to come down on the bee-keeper in the hope of getting a little cash easily.

You will, no doubt, probably remember me calling on you at King William-street about twelve months since, and our conversation with regard to regulating hive temperatures by new kind of thermometer. Well, I had a good lot of work away from home about that time and a busy season later on, and, in consequence I was unable to get the apparatus fixed and at work in the hive for this winter, but it is now almost complete, and will be ready as soon as we can open the hives without doing any damage. I hope to be able to take records under all conditions, and with the hive in natural condition outside.

I am wintering five stocks, had a good season, about 240 lb. from three of them. Wishing you a happy New Year. — F. CULPAN, *Cambridge, December* 30.

[4627] I think this insurance scheme should prove a boon, especially to bee-keepers whose apiaries are in or near populous places. Some years ago a swarm in this town settled on a donkey harnessed to an invalid chair; the inevitable took place, and the occupant of the chair (an elderly lady) was much injured. With best wishes for 1902.—A. MACINDOE, M.D., *Old Hayes, Sidmouth, December* 30.

[4628.] I observe with favour the insurance scheme mentioned in your "supplement," but what about the many beekeepers who do not belong to any association, to whom are they to apply?—SLIEVE DONARD, *Co. Down, Ireland, December* 28.

[See reply to Oliver Mourant.—EDS.]

TITS AND BEES.

[4629.] I am but a novice in the art of keeping bees, but, none the less, I have been keenly on the watch this winter for enemies. The B.B.J. comes to hand weekly, and has been most helpful. The letter of Mr. Hiam (4608, December 19) was certainly a surprise to me, as I knew from more sources than one that tits were fond of bees.

My hives are situated in a little glade that I have cleared amongst some oak trees, and, as Mr. Hiam writes from Worcestershire, where tits are very well-behaved, and Mr. Loveday from Essex, where they do damage, I thought perhaps a word from Hampshire might be acceptable.

In order that the tits might have no excuse for visiting my hives (which are only 150 ft. from my dining-room window) I made a large double crossbar and table for other birds, from which hang two pieces of fat and two halves of a cocoanut. Now, I thought, I shall be all right, but to my great annoyance, last Sunday week, I found, outside my strongest stock, only a few inches from the alighting-board, some 200 to 300 mutilated bees.

I could not, then and there, say whether mice or tits were to blame, but finally set a double-ended mouse-trap just by the alighting-board. On visiting the hive in the afternoon, sure enough I found Master "Cole Tit" caught and drenched through and through.

Now I am not prepared to say that the tits caught the bees as they came out, as I did not see them, but that they visited the hive I am positive. I send you some of the bees herewith. Can you tell me from their present condition whether they were caught alive and killed, or whether they were eaten after they were dead?

It seems to me an extraordinary thing that 200 or 300 bees should be found dead from natural causes outside a hive that has plenty of stores.

I am inclined to think that tits, like human beings, occasionally desire a change of diet, so after regaling themselves on a meat course of suet and pudding course of cocoanut, they finish up with a dessert of bees.

I am intensely fond of birds, and have never discharged a gun on my place, but I shall certainly protect my bees against the attacks of tits, seeing that the latter are so bountifully provided for.

I may say in conclusion that I liberated Master Tit, and saw him safely into the bushes, in the hope that he might communicate the fact of his capture to his fellows, and so stop the raids on my hives.—R. Beck, *Bitterne Park, Southampton, December* 28.

P.S.—May I add that I consider the wood of many of the hives supplied by the makers is a great deal too thin, and be as careful as you may in canvassing and painting your hive-roofs, nothing can beat zinc. One of our leading makers has acknowledged as much, and his letter is before me as I write. He says this will be remedied next year.

[The dead bees sent afford indisputable evidence of the work done by tits, all the fleshy parts being eaten, and only the wings and shell of abdomen left.—Eds.]

ABOUT WASPS.

[4630.] On the subject of wasps, I send you extract of letter, dated from Stepney Borough Museum, November 23, addressed to Mr. H. W. Brice:—". . . . The nest you kindly spared to me for this museum is still flourishing, and an object of great interest to our visitors. . . . . Nearly all the males and, I believe, all the workers are now dead, but the queens are feeding well, and show no disposition to hibernation. Last Tuesday week, the 12th, the nest was particularly lively, and we think quite 100 queens were out. I should very much like to hibernate some of the queens, and make an attempt to get them to build in the spring. I am not certain what surroundings would be best or possible to give them. We have fed our wasps on sugar, Swiss milk, and a sample of Virol we had sent us."

With regard to queen wasps surviving for another season, I remember keeping a number of queens in a nest without feeding them during the period of hibernation. They refused the honey I gave them when they showed activity in the spring, and every one of the queens died. I was told that I should have given them a flesh diet. I should add that the nest was kept in an attic, under a glass shade, and the wasps were, of course, subject to changes of temperature in a way that would not have been the case, to the same extent, in a nest underground. I name this to elicit comment from any of your readers who may have had experience of the question.—E. D. T., *Eynsford, Kent, December* 26.

BEES IN FORFARSHIRE.

[4631.] I send you a short account of our bee-doings for the year 1901. We started the season with four stocks, three in fair condition, one weak. Having decided to try the method advocated by Mr. J. Rymer, we gave to one stock, on May 29, ten standard frames with ready-built comb (not foundation, as Mr. Rymer does) above adapting-board. The bees quickly took possession of upper chamber. And on June 8 we put on a rack of 1-lb. sections fitted with starters. On June 29 the queen was confined to lower chamber by excluder zinc, at which time eighteen of the twenty frames were full of brood. July 7—we put on a rack of 1-lb. sections, with starters. July 22—removed ten standard frames containing 60 lb. of honey, all well sealed. July 24—removed rack of finished sections.

After removal of these the old queen was

last out, and on examination we found a young queen in hive. July 26—removed another rack of finished sections, and put on two racks fitted with full sheets of foundation before removing; shifted hives to the heather same night. The other three stocks swarmed. In the case of two the queens were removed and the swarms returned after cutting out the queen-cells so as to prevent second swarms. In the other case a nucleus was formed by taking two frames of brood and bees and a couple of queen-cells, placing them in an empty hive, and stopping up the entrance with grass; the swarm was then returned. The nucleus has since built into a good stock. Our take of honey from the four hives was as follows:—

	Clover. lb.	Heather. lb.	Total. lb.
No. 1 ..	102 ..	42	144
No. 2 ..	63 ..	63	126
No. 3 ..	53 ..	53	106
No. 4 ..	42 ..	42	84
	260	200	460

No. 1 was worked on the Rymer method. The clover season in this has been considered very good. The heather rather under the average. Those who took their bees to the heather on or after August 2 got no finished sections, the greater part of the crop being gathered the previous week.—WATT & MIDDLETON, *Brechin, N.B., December* 23.

A PLEASANT PARTING WORD.

[4632.] Please stop my B.B.J. at the end of this year (1901). I have, alas! to give up my bees, as I am leaving this neighbourhood. I beg to thank you for your courtesy in answering questions and giving help during the eleven years I have kept bees, and I consider I owe my success in bee-keeping in a great measure to the help I have received from your JOURNAL. In my most successful year I cleared £50, besides buying a new extractor, a honey ripener, and a lock-up railway churn for travelling honey in bulk (not taking into account my labour), from twenty-one stocks (spring count). Wishing you every success for the New Year.—H. C. HAWKER (LIEUTENANT), *Longparish, Hants.*

[We are more than pleased to have in some measure contributed to the success of our correspondent as a bee-keeper, and trust that if again a favourable chance occurs he will still find pleasure and profit in "the bees."—EDS.]

THE HONEY BIRD.

[4633.] I enclose cutting from a letter in the *Times* of August 23, 1901, written by a correspondent with the Abyssinian Field Force, and dated May 20 of the present year. The facts may interest readers of the B.B.J.—E. D. T., *The Priory, Eynsford, Kent, December* 23:—

"On our way I made the acquaintance of the Morris or honey-bird, of which one has often read in travellers' books, but of whose existence and powers I had personally always been sceptical. I encountered the bird as I was wandering one morning along the hills skirting the valley in search of any game that might present itself. A bird settled on a tree in front and began to chatter volubly. The Somalis with me explained it was Morris, the honey-bird, with tales of whose wonderful doings they had often regaled me. The bird seemed to be about the same size as a thrush, with a grey breast and yellow beak and long tail. We followed it as it fluttered from bush to bush, and if we halted even for a minute it came back urging us to move on. The Somalis kept whistling and talking to the bird, which seemed to make it more talkative than ever. At last it stopped and would lead us no further. The men began to search in the jungle to see if it was a lion it was taking us to, for the Morris is just as likely to do so as to show you honey; but there were no signs of any dangerous animals. On examining the trunks of the trees near by, I found a tiny crevice in the stem of a dead trunk, out of which exuded some moisture which, on being tasted, was found to be honey. To avoid the attacks of the bees a fire was first lit, in the smoke of which the men could take refuge, and then the *shikari*, climbing up the stem a few yards, discovered a large hollow running down the length of the trunk. We immediately set to work with our hunting knives and cut out the front of the tree sufficiently to allow a man to reach down to the depth of the hollow, whence he pulled out four long pieces of excellent comb honey. The bees, curiously enough, did not attempt to molest the thief. The honey-bird sat by all the time, eagerly watching our doings, and when we left we placed a piece of the spoil on a branch of the tree, which Morris at once attacked greedily, and we left him there.

"These birds are an interesting study; the Somalis affirm that they will lead you to honey, lions, or large snakes indiscriminately, and also ascribe to them the power of ferreting out in a village an evildoer, when the bird will, they say, haunt the neighbourhood and constantly settle on the roof of the man's hut to whom it wishes to direct attention."

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. Carbines, whose apiary is depicted on next page, is a reader who may be called a professional bee-man, in so far as he deals in queens, swarms, and honey on business lines. We also know that he makes the business pay him as an adjunct to his other pursuits. His "Notes," sent at our request, are useful and interesting reading, so we add nothing except

to emphasise the last "word of caution" to those who contemplate making a start in the craft. Only those with some aptitude should start at all.

"I started bee-keeping in July, 1895, by the purchase of a skep at a sale. At that time I only knew that bees had stings and gathered honey. However, having got my skep, I went to a bookseller's shop and inquired for the best 'book on bee-keeping.' Asked if I meant in skeps or in box-frame hives, I replied 'skeps,' as I 'knew nothing about frame-hives.' Result: Pettigrew's 'Handy Book of Bees,' which I thought at the time was a grand book.

"In the autumn of same year I bought three condemned lots of bees, driving them

MR. E. CARBINES' APIARY, VENN, CARDINHAM, CORNWALL.

myself from Pettigrew's directions. By some means my original stock in skep died in the winter that followed, but I succeeded in bringing the three driven lots safely through, and they did well the following summer. From those three lots practically the whole of the bees and bee-produce I now possess has been obtained.

"In the second year of my bee-keeping I first learned of the B. B. J., then of Mr. Cowan's 'Guide Book,' and, of course, soon wanted to know what the frame-hive was like, so bought one from a well-known maker. Since then I have made all my own. And after having tried almost all shapes and sizes (keeping always to the 'Standard' frame) I much prefer those on the 'W. B. C.' plan, but for my district I find it better to make it take twelve frames instead of ten.

"When the photo was taken I had twenty-one stocks away at the heather, but somehow they did not increase their stores much this season, although there was plenty of blossom. Ours is a very fair district for honey, but I find it tells against a big average take when one goes in for selling swarms and queens, of which latter I rear a good many, and have sent them about all over the country. Still I have managed to get about 15 cwt. of honey for each of the past three years. My best stocks have given me over 100 lb. of surplus honey each year for now four years running. The number of my colonies varies from fifty to ninety, as I sell a good many stocks during the year, and then increase by means of nuclei usually.

"Nearly all my honey is sold wholesale at from 7d. to 10d., nor have I had much difficulty in disposing of my crop till this year, when I find myself with about 600 lb. on hand for disposal.

"I have this year staged honey at our local shows in eight classes, and from this number have secured one 1st, three 2nds, and three 3rds, which I think very good. I have also this year obtained the 'Expert's Certificate' of the B.B.K.A.

"Unlike many of our bee-men, I possess no 'better half' to bottle up the honey and pocket the money, but have a sister as housekeeper (who, by the way, worked the shutter for the

photo, as I am a bit of an amateur photographer). Unfortunately, my sister does not like bees, so I have pretty well all the work to do single-handed.

"Now, having said all this about myself and the bees, I would conclude by adding a line to say, if my advice is likely to be of any use to any reader who is a beginner to the craft, I would say: Read first the subject up well; next buy a good hive from a reliable maker, and make yourself thoroughly acquainted with all the working parts; then get a strong swarm of bees of a good working strain, give them a good start after hiving, and deal very gently with them in handling. Go slow; learn to *understand the bees*, and by treating them well, get them to understand you; they will treat you well, as I find they do me.

"Finally, and as a word of caution, let me say: There are a number of people who start bee-keeping without possessing any natural aptitude at all for it. In these cases I consider it would be the greatest kindness to the bees themselves and to bee-keeping generally if they would drop it again at once, or as soon as they find out their mistake."

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Le Rucher Belge.—M. Person says:—"At the end of August last I was hastily summoned to examine a hive of bees said to have died off with foul brood. I suspected rather that it was queenless. On investigation we found a few hundred bees running wildly over the combs; this was all the population. Removing the second frame, an unexpected sight presented itself to our view; one might have thought that all the spiders in the country had held rendezvous and spun their webs there; but the presence of great grey grubs escaping from all corners betrayed the presence of the wax moth.

From one end to the other of the hive the combs were fastened together by a mass of white threads that could be torn off by handfuls. Never had I seen such a thing. I could have drawn away the whole by raising one comb, and the grey grubs came out by hundreds, and cocoons were fastened to every available nook; the hive was full of them—enough to people a province. The combs were a black mass of threads and dirt; there was nothing to save. Everything was placed in a bucket of water, and the hive thoroughly cleansed and put away for the next year's use. Nearly the same experience has happened to myself, and it requires care and constant supervision to be sure that this pest has not attacked any part of the apiary. It is wise to sulphur any combs which are to be kept, and in case of any colonies being weak or small, not to give more comb than the bees can well cover. The wax-moth eats wax, pollen, propolis, and also the wood of which the frames are made."

Rucher Belge.—Digestive Lozenges can be made by melting in a bain-marie 3 oz. of pure gelatine in 3 oz. of water; then add carefully, while stirring thoroughly, ½ lb. of honey previously warmed. When well incorporated add a little cochineal and five or six drops to every 3 oz. of English essence of peppermint. This is then run into lozenge moulds or thinly on to a plate, dried in the cool, cut into shapes, and finished drying for eight hours in a dry place.

A Healing Balsam, really valuable in case of wounds or injuries to the skin, is prepared in the same way in a bain-marie:—Take of wax from the cell cappings 1 oz.; of fresh propolis, 2 oz.; of the finest honey, 7 oz. After all is well mixed pass through a close cloth, and press out well; replace in the bain-marie; add a little cochineal and a few drops of essence of lavender; then beat the mixture well with a fork, and fill into small pots, which fasten down closely.

L'Apiculture.—M. Legros, of Bayonne, Bas Pyrenées, offers gratuitously to the readers of this paper specimens of the excellent bee-plant *Vitis Davidii*. The *Vitis Davidii* is a deliciously-scented, ornamental plant, of which the abundant flowers are eagerly visited by the bees.

Bulletin de la Société d'Apiculteur de Tunisie.—A new paper is being published quarterly to encourage bee-keeping in Tunis, bees having long been kept in a primitive fashion by the natives, and the importance of the industry has not yet been realised by the colonists. The climate seems naturally formed for the production of honey, which has been successfully carried on by the natives notwithstanding the simplicity of their methods. The paper touches on the great value of the bee, as fertilising the vine and other fruits; then it describes the hive and its inhabitants, the queen-bee and her life-history, and that of the drone and worker. It gives an estimate of number of hives and amount of honey produced in Algeria in 1898 as an encouragement to the bee-keepers of Tunis, who have the same climate and vegetation.

Schweizerische Bienenzeitung. — A bee-keeper makes the discovery that a hive of bees placed in a shady situation and facing north succeeded better than those which stood in the full sun facing south. The bees began work a fortnight later than the others, but worked on steadily and produced twice as much honey as the others, and sufficient for their own winter supply besides.

Deutsche Illustrierte B. Zeitung.—A bee-keeper of thirty years' standing writes that for some weeks his bees had taken to collecting soot! Hundreds of them flew out of

the stove flue in his study, and their appearance proved that they had risked the danger of smoke and heat. They were quite black with the soot, and mostly were carrying loads of soot back to their hives. So far as could be known they had all they needed—natural pollen in abundance, and artificial flour was offered them, and remained untouched.

Can any readers say if they have had a similar experience, or give any idea of the reason for so strange a proceeding?

Deutsche Bienenzucht (Stettin).—A strong colony in a good hive was greatly troubled by lice. The queen showed at least fifteen. I gave a fresh queen, but after a few weeks the condition was as bad as before. Smoking with tobacco and oil of thyme had no effect, rather injuring the bees than their parasites, and although wintered with 20lb of honey, the whole colony succumbed to disease during the next following winter.

Deutsche Bienenzucht.—Linameggi, near Werro, in Livonia, May 5, 1901.—In this excessively cold climate the hives have to be so constructed as to take thick layers of "torf" (dried peat), and higher than the ordinary hive to admit of placing over all a very thick straw mat. Over the whole a wide lid is placed as roof. The bees are often kept shut in by severe weather for as much as eight months. On April 7 this year they had their first flight, after which cold set in again until the 14th, so that no bee could fly. Until May 3 a cold north wind lasted, never below 1 deg. of frost by day, and a strong frost by night. On April 17 they were examined; all had still a good store of honey, and most hives had young brood in different stages. Although sometimes flying, they could gather nothing, as the nut and aspen catkins were frozen. At the present moment (May 5) there is 1 deg. of frost and it is snowing heavily, but the bees have plenty of honey, and can attend to their brood nests meanwhile. There is no need for anxiety respecting them.

Apicoltore.—Signor Passeri, from near Teramo, in Italy, gives an account of how his apiary had been continually robbed during a period of two years without his being able to trace the thieves. The thefts were so constant and so cleverly managed that two honey harvests were almost completely lost, while previous years they had been exceedingly abundant.

One morning, returning home after a short absence, Signor P. discovered that the thief, among other traces of his visit, had left behind a pair of old military gloves, marked and stained with propolis and pollen. The police traced them to his tenant, and in his house they found other proofs of his guilt, and he was arrested, and, after a long debate, was condemned to a year's imprisonment, to make full compensation, and to pay all the law costs. The injury done is not easy to compensate. Not only has there been no honey harvest for the last two years, but the bees have been cruelly ruined, and a few thousand lire (a lire, 10d.) entirely lost.

Bulletin de la Soc. d'Ap. de la Somme.—You can make a good imitation Madeira wine as follows:—Take ten quarts of good white wine; dissolve in it one pound of sugar and the same quantity of honey; add a little pure spirit—35 per cent.; add two handfuls of hops. At the end of eight days, filter and bottle.

Queries and Replies.

[2771.] *Brimstone Fumes and Foul Brood.*—In this straw-plait district it is the common custom, in order to improve the colour of straws used, to make plait and expose them in a chamber for several hours to the fumes from a vessel of burning brimstone placed also therein. Will you please to tell me if hives, frames, and other bee-appliance infected with foul brood, being first scraped and otherwise cleaned, and treated as above, would thus be disinfected? The process is simple, inexpensive, and could be easily repeated. Information will be gratefully received.—"THREAKERS," *Berkhamsted, December* 27.

REPLY.—The fumes of burning brimstone are known to be an excellent disinfectant against germs of all kinds, but so far as regards the spores of foul brood they are of no more use than smoke from burning rags. The nature of foul-brood germs has been dealt with so often in our pages, besides being described in the "Guide Book," that it seems odd to hear of any reader not being conversant with the fact that while the bacilli of foul brood is easily killed by chemical agents, the spore will stand an hour's boiling without destroying its vitality.

[2772] *Dead Bees Cast Out.*—To-day (December 30) I noticed an unusual amount of dead bees about the entrances of my hives—I should think from thirty to forty at each hive. 1. Do you know of any reason for this? When I packed the hives up for winter about the end of September the bees looked strong and healthy, with plenty of stores. 2. I also gave them some candy made according to "Guide Book" recipe, of which I enclose sample. Is it all right? I also send a few dead bees for you to see. 3. Do you think fighting would be the cause? If so, how would you stop it? I shall be pleased if you can help me through the B.B.J. this week; also as to sample of candy enclosed.—NITRAM, *Wokingham, December* 30.

REPLY.—1. There is no cause for alarm in dead bees being cast out; they are the old and worn-out bees which die off in the course of nature and are cast out of the hive. 2. Your candy is very good indeed. 3. No; the mortality is just normal.

Echoes from the Hives.

Sturry, near Canterbury, December 30.—After an enforced confinement to the hives for several weeks, owing to wet and boisterous weather, we had a welcome change on Saturday, the 28th, and after a rainy night, Sunday morning dawned with a clear sky and a warm south wind, consequently the bees had a grand cleansing flight, and well did they avail themselves of it. From about 11 a.m. until 2 p.m. the bees revelled in the warm sunshine, the flight-boards being covered and the air alive with bees careering around overhead. Nor did they spend the whole of the sunny time in flight, if one may judge by the dead bees thrown out. I, too, took advantage of the bright morning by lifting off the roofs before going to morning service, thus giving the winter coverings a good airing. I always make a point of doing this during the winter months whenever the weather is favourable.—ARTHUR H. HOMERSHAM.

Chichester, December 29.—Echoes! Yes, echoes! Although the word almost seems to have died out in your pages, time was, and not so many years ago, when one could sometimes count on seeing a dozen echoes in the B.B.J., all very interesting and instructive reading, at the time our old friend John Walton used to echo a few lines of his bees' doings from the hives. I suppose it is that bee-keeping has become so much of an £ s. d. consideration that bee-keepers cannot find time to echo their doings. Well, to-day for about two hours the weather has been quite spring-like, and bees have had a good cleansing flight, which, no doubt, has done them good, in changing their quarters and getting into closer proximity to sealed stores. I only noticed one stock where dead bees were being carried out in any quantity. These, no doubt, were from the outside of cluster, too far away from food during the late frosts. Young beginners should not be alarmed at this; only this is the time when the entrance will become blocked if not seen to, and cause suffocation later on if not cleared away. Wake up, ye Echoites, and re-echo again!—Wishing all a happy and prosperous New Year.—J. D.

ABOUT WASPS.

From the recent voluminous correspondence in the *Standard* on the subject of wasps and their depredations, we select the following as being both interesting and useful to B.B.J. readers:—

"To the Editor of the *Standard*.

"SIR,—Let me assure the Rector of Mitton of my sympathy in having his fruit destroyed by wasps during last autumn, a complaint that has been universal throughout the country. Few gardens but have suffered from these insect pests. Having the management of a large garden, where all sorts of fruits are grown in quantity, it becomes necessary that everything should be done for their destruction. Our efforts in this direction have been successful. The loss sustained by wasps has been small, whilst many gardens in our district have suffered severely.

"During the autumn every known nest around us was destroyed. This prevents the queens of the future leaving their nests. One caution is necessary. Never interfere with the nest during the day. Simply place a small branch near the entrance as a guide. After dark go round with a lamp and a waterpot of gas tar (easily procured at the nearest gas works), pour about a quart of the liquid into the hole, place a piece of turf on the entrance to seal it, or tread with the foot, and the work is complete. Should the entrance be in a bank, with the hole going upwards, use a piece of cotton rag with a tablepoonful of sulphur, light the rag, and blow the sulphur fumes into the nest with a bellows. There are numerous other methods; but the two mentioned are simple and efficient; never a single failure.

"In April the young queens are on the wing. Let every one seen be caught and destroyed. A net, such as used for catching butterflies, is useful. In glass-houses a few twigs of birch is the best thing; but I regret that I cannot tell your correspondent any way to entice them into a greenhouse, or of trapping them. There are some shrubs that the queens have a liking for, notably the myrtle. A few years ago 200 were destroyed during April and May on these shrubs. Then, again, a mild and genial April, succeeded by a wet and cold May, destroys great numbers. It may be considered a duty on every lover of a garden to destroy these pests, thereby saving their fruit, and ofttimes preventing serious illness from their stings.—JOHN GILMOUR, *Seacox Heath, Hawkhurst, December* 27."

"SIR,—In answer to your correspondent, I consider the best way to destroy queen wasps is to fold up an old curtain or blanket in a summer-house or outhouse in the early autumn, where it is not exposed to the cold. The queen wasps will creep into the folds for shelter, and are easily taken. On one occasion I found nine queens hidden amongst a pile of blankets in a disused room; on another, four queens in the curtains of a bed. Every winter I find some hidden amongst the coverings for my frames in an old stable.—I am, Sir, your obedient servant, A. M. NORGATE, *Formosa, Paignton, S. Devon, December* 28."

SELLING SECTIONS.

WEIGHT *versus* COUNT.

For some little time there has been an effort made to sell comb honey by the case and count of sections instead of by the actual weight of the honey contained therein. There is before me as I write two letters from parties desiring to sell their honey in this way—namely, so much per case of twenty-four sections, without reference to the actual weight of honey contained in the case. Both of these parties (who are car-load shippers) were requested to name their price per pound. In reply to that letter one of them writes :—

"In reply I will state that it is not possible to quote any honey by the pound, for the reason that the different honey producers use different weight cases, and it would be an endless task to arrive at the net weight of 1,000 or more cases."

The other one writes :—

"In reply to your favour of the 26th inst. I beg to say that we make it a rule to sell by the case only, as selling by the pound would put a premium on the non-separatored honey, which is not as satisfactory to the dealers as the nice separatored article, which is much more even in weight and less liable to injury by careless handling. We hope that selling by the case will soon come into more general use."

We hardly care to make any comment on the foregoing quotations, but merely introduce them so that the reader may know that there is more or less honey in the comb being offered for sale in this way. To say that by selling by count is more satisfactory than buying by the pound brings to our memory the old adage so often repeated, that "It is never wise to buy a pig in the bag," for, in all probability, it is a pig, yet when the bag is removed it may not at all meet the expectations of the buyer.

It may be conceded that some, if not many, of our expert bee manipulators can get the bees to store in each section a given quantity, filling each section with no more or no less than is contained in all the neighbouring ones. Now if this were the case generally, the use of scales might well be abandoned; but if it takes the bees longer to put 16 oz. of honey into a section than it does 12 oz., and a correspondingly longer time to put in 12 oz. than it would 9 oz, is it not reasonable to infer that some man less scrupulous than his neighbour would manage it so that he could get a little less honey in the section, and thus a greater lot of sections filled in a given time by the bees than his neighbour could? He would then be able to get as much money for the number of sections as his neighbour produced, and, having produced a fourth or a third more filled sections, he would be that much better off financially than his neighbour, and the purchaser would have that much less honey for an equal sum of money; therefore, it would be only a little time before a case of twenty-four so-called 1-lb. sections, instead of weighing from 22 lb. to 24 lb., as was supposed to be the case at the beginning of this method, we soon find that the cases, while containing twenty-four sections, in many instances weigh from 17 lb. to 19 lb.

Although this method of selling honey in any quantity has not been in vogue more than three or four years, already we find a twenty-four-section case to weigh nearer 19 lb. to 20 lb. than 23 lb. to 24 lb., yet there are some producers in a collection of a thousand cases of comb honey, whose cases weigh from 23 lb. to 24 lb., while others run from 17 lb. to 19 lb, there being no apparent difference in the grade of honey when viewed through the glass exposure, but there is, when sections are compared with one another, a noticeable difference in the thickness of the comb.

If all men were evolved up to one standard there would be little need of checking one's accounts against another; but inasmuch as we are not yet, as a whole, at the stage where we will not practise deceit for the sake of personal gain—a false gain, to be sure, but, nevertheless, one that is daily practised by a very great number of us—and the desire so prevalent to excel our neighbour in getting the best of a bargain is so constantly in mind, that this method of selling honey by the case, without reference to the net weight of the contents, is a great temptation to a moral nature not over strong. It would be as fair to buy our sugar and tea by the bagful without weighing it because the merchant says, "My bags hold just so much in weight, and it is unnecessary to weigh the goods I serve you for so much;" while it is true that since paper bags are made by machinery they vary but little in size, the machinery being so nicely arranged that it cuts the paper with great accuracy, folds it with corresponding accuracy; thus the bag when complete, if properly filled, will each time contain almost exactly the same amount of sugar, tea, or coffee. But there are some merchants who want to sell a bag of tea, coffee, or sugar for a little less than their competitors, and to enable them to do so, and yet make a profit, they arrange for a bag that will hold a little less than the so-called 5-lb. or 10-lb. bag they have previously been using and their neighbour is using, and by this means they are able to draw those who formerly bought of their neighbour to buy their goods, for the most of us consider it necessary to buy where we can buy the cheapest.

It seems to us that it would be just as reasonable to abandon weighing one of the commodities we have mentioned as it would the other, for in either case we would be putting a temptation in the way of a weaker brother by giving him an opportunity to cheat without fear of detection.

It has been said in support of buying honey

by the case that nearly all the retailers sell it by the section and not by the weight. Let us grant this to be the fact. The sections are taken out of the cases, or they are arranged in such a way that the buyer can see what he is getting—if it is sold to him as weighing a pound, and if he doubts, he can ask to have it weighed; if the merchant refuses to do so, it would be a tacit admission on his part that he was deceiving his customer. Now there are very few merchants who would take that risk, for the reason the patronage of the customer would be worth much more to him than the little he could make on a section of honey; for how many of us would continue to trade with any one whom we found deliberately trying to cheat us?

We could cite many other reasons that to us are logical against buying or selling honey in what seems to us a very primitive way, namely, of guessing at what the weights might be. When nowadays scales are cheap, and business is done so closely that the guess is no longer admissible, if for no other reason than the ill-feeling it is liable to arise between the parties buying and selling, it should be dispensed with.

Our purpose in the foregoing is to call the attention of bee-keepers to this subject, especially when we find that organisations of bee-keepers in some instances are advocating the abandoning of weighing their honey and selling it by the case.—R. A. BURNETT & Co., in *American Bee Journal.*

PRESS CUTTINGS.

LORD AVEBURY ON BEES AND ANTS.

The Mayor of Stepney recently presided at the Free Popular Science Lecture in the Museum, when Lord Avebury told some charming stories of his many experiments to test the intelligence of animals. How his dog "Dan" learnt to distinguish between plain cards and cards with the words "food" and "out" printed on them, and to bring them to his master—the "food" card when he was hungry, and the "out" card when he wanted a walk. Lord Avebury's fame as a student of bees, ants, and wasps is widespread, and the large audience listened eagerly to the details of his experiments with these animals. There was a pretty experiment by which he discovered that bees prefer the colour blue to orange. Wishing to see how ants would treat drunken members of their community, he tried to induce twenty-five ants from one nest and twenty-five from another to take sufficient alcohol to make them intoxicated, but they refused, so they were bathed in whisky till they were drunk. Then the fifty intoxicated ants were placed in one of the two nests. The inhabitants, after examining them, carefully picked out the drunken strangers and dropped them into a neighbouring water-butt. The twenty-five drunken friends they carried carefully to a remote part of the nest, there to sleep themselves sane. To test the ants' susceptibilities to music the lecturer placed some honey on a musical box, which, much to the distress of the household, he kept playing "I dreamt that I dwelt in marble halls" for a fortnight. Alas! the ants found the honey on the box just as well when it was silent. Lord Avebury did not make any definite distinction between "instinct" and "intelligence," but it is to be concluded he would apply the word "instinct" to the processional caterpillars, who can only find their way back by means of the silk they have woven in their journey, and "intelligence" to the dog, who can learn to recognise the appearance of a card which, when taken to his master, will induce him to give the dog food when he is hungry. The Mayor proposed a vote of thanks to the lecturer, which was enthusiastically given, and Lord Avebury, who was greeted with loud and prolonged cheering, briefly replied.—*East London Observer.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. GEARY (Hinckley)—*Henry Alley's Books on Bees.*—We know of no place in England where the above works may be had, but so far as a copy of "The Bee-keeper's Handy Book; or, Twenty-two Years' Experience in Queen-Rearing," by Henry Alley (published at one dollar), we can supply you with a clean second-hand copy, bound in cloth, for 2s. 3d., post-free.

E. O. BRAYSHAW (Bradford).—*Bee Associations in Yorkshire.*—The hon. sec. of the Yorkshire B.K.A. is Mr. R A. Grimshaw, 3, Manston-terrace, Crossgates, Leeds. There are also several district associations, such as the East Riding B.K.A., the York and District B.K.A., and others. We will send names and addresses of secretaries of the latter if desired.

JOS. CHAPMAN (Belfast).—*Coloured Glasses for Grading Honey.*—The glasses referred to can only be had from the secretary of the B B.K A. If you failed to send on the cash when writing Mr. Young, it would account for his non-compliance with your request. Write again, and enclose 6d. in stamps, and we have no doubt the glasses will be forwarded.

Editorial, Notices, &c.

INSURANCE FOR BEE-KEEPERS.

The letters in our last issue, dealing with the question of insurance, have been supplemented by some inquiries for particulars from those who are favourably disposed towards the scheme. It is also notable that a good proportion of those who are interesting themselves in the subject are not members of any County B.K.A. We are not yet aware to what extent the circulars sent out—as a supplement to our issue of December 26—have been used by the various county associations for distribution among their members, but we must impress on readers generally the fact that unless a considerable addition be made to the number of names received so far, the scheme will be in danger of falling through from sheer lack of support.

It should, therefore, be realised that the effort, if it is to be effectual at all, must be made at once. And we again urge our readers to make up their minds without delay, and send their application direct to Mr. Edwin H. Young, Secretary, B.B.K.A., 12, Hanover-square, London.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

A NEW YEAR'S "NOTE."

[4634.] I have thought that, amid the many "notes" reaching the B.B.J. office from all parts, you may possibly find room for one from Mid-Shropshire. First allow me to congratulate you, Messrs. Editors, and your numerous correspondents, upon making the BEE JOURNAL so very helpful and interesting to us bee-keepers during the year just past—certainly brighter and more interesting than any year since I have known it. Is it because a large number of correspondents have helped the Editors to swell the columns of our journal, or is it because 1901 has been such a wonderful year for bees and honey? The yield in this part, as in most others, as regards quantity and quality has been altogether nearly 1 cwt. per hive, but "takes" of over that weight have been common with some, while all of it has been of the best quality. Sales, too, have been remarkable. As far as I can gather very few in our district have any honey left on hand. Of course, we can never get samples of extracted honey to equal in colour that obtainable by southern friends. I do not suppose that a single plant of sainfoin could be found in the whole of Mid-Shropshire. But as regards white clover honey, I don't think that many can beat us. In this one respect, at least, by what I can observe, those who are located in sainfoin districts have a partial monopoly of the prizes on the show-bench. A great quantity of comb honey is produced in this district, and we can hold our own in sections, even against those from the sainfoin. I might here say that Shropshire beekeepers on the whole are "a bit slow." They rather lack the enthusiasm which is so desirable in a go-ahead, or up-to-date, beekeeper. I regret to say that of the hundreds of beekeepers in Shropshire we can scarcely keep our county association above water. They all appear to be doing so well with their bees individually, that there seems no desire to be connected with associations. This feeling is deplored by a few of us who have the welfare of the association and of bee-keeping at heart.

In conclusion, and with your permission, I should like to add a few words *re* the "tall section," about which so much has been said. I did not take part in the very exhaustive discussions *re* these sections in the B.B.J. last spring. I decided to put them to a stiffer test than paper argument would allow, so I ordered 300 of them by way of trial. Most of these were used on the hives, and the results were everything to be desired—so much so that I intend trying more of them this next season. They were in strong force at our Shrewsbury Show held in August last. The "tall sections" belonging to myself and one other bee-keeper very nearly "swept the deck" of first and second prizes. Our friend Woodley implied, in his "Notes by the Way" in one issue of B.B.J., that he had not seen a really good tall section. Well, Sir, I can only say that *some of us* have. I saw the sections that beat Mr. Woodley at Market Drayton, and those that placed him second at Shrewsbury, and were first at several places besides. I entered twenty-four sections from one rack in the "open class" at Shrewsbury and won first with them. Some very old bee-keepers said of my prize lot referred to that they were the best sections they had ever seen.

Now a word about how the tall section does for sale purposes, and my note is ended. My experience is that they sell splendidly. We have had no need to "go a-begging" for customers, and at top prices too; 10s., 12s., and even 15s. per doz. has been paid this season, so all are satisfied. The stock is sold out and

we start afresh for 1902. To those who have not tried tall sections I say, Don't be too unkind in your criticisms until you have by practical experience given them a chance.

May you, Mr. Editor, and all our brothers in the craft have a bright, happy, and prosperous New Year.—JAMES CLAY, *Albert-road, Wellington, Salop, January 6.*

TITS AND BEES.

[4635.] I have read with much interest the controversy *re* tits and bees, and should like to say a few words upon the subject.

My residence is about twelve miles from your correspondent, Mr. J. Hiams, where, it would appear, the tits are more highly educated than in some other parts, and as the hives are not more than three yards from my dining-room windows, I can readily observe everything which goes on.

Just before the late severe weather, a pair of coal tits came regularly night and morning and cleared the alighting-board of dead and dying bees, but not one instance did I see of their catching or waiting for those bees who were upon business thoughts intent.

Now, in my estimation, the real fault lies in the hives themselves.

If bee-keepers, instead of using the flimsy things made of wood, about $\frac{3}{8}$ in. thick, with for doorways simply a hole, and in many cases large enough for a fair-sized rat to enter—which I constantly see about—would have them made of 1-in. wood, frames at right angles to front, double walls back and front, and the entrance let into floor board on the Cowan principle, the actual door would be underneath the front, $2\frac{1}{4}$ in. ($2\frac{3}{4}$ in. in my case) from the extreme outside; then Tom and his wife are unable to use the knocker to fetch the bees out.

Birds of numerous kinds build in my garden (nearly an acre), are never disturbed, and will not be until I have positive proof of their evil intentions towards my greatest pets, "the bees."

I was very pleased to read your remarks anent insurance, for I am convinced if this is to be successful it must be extended to all.—C. H. TOMLINSON, *Solihull Lodge, King's Heath, January 4.*

ENEMIES OF BEES.

[4636.] My first thoughts of becoming a bee-keeper came through reading Mr. Cowan's "Guide Book," and the only paragraph in this useful work that somewhat held me back from venturing on the idea was found under the heading of "Enemies of Bees," for there it states that tits are amongst the malignants. Being a lover and encourager of all bird life, and having got two pairs of tits established and nesting in close proximity to where I thought of placing my first hive, made me doubt as to any success in my venture, but taking up the hobby for outdoor pleasure, and not for a financial reason, I purchased my hive and swarm, and resolved to watch intently if my feathered pets were as black as painted. Daily for hours together did I, unobserved, watch their every movement right through the breeding season, when each pair were occupied with a constant carrying in of food for the hungry nestful of young; and seen the sycamore tree when in bloom (where I had one nest in a box I have provided) swarming with bees, but never once did I see the tits kill or molest a single bee or trouble my hive. So after this thorough, constant observation I erased their name from among the enemies of bees, and a feeling of deep regret is within me when I see such able writers on the craft as Messrs. Loveday and Woodley willing to hang, draw, and quarter these beautiful little creatures; but I am fully convinced that if these two gentlemen will take the trouble to watch tits under ordinary circumstances, they will, like me, find that they have been wrongly classified, and it is only another case of give a dog a bad name, &c.

Mr. Woodley, in his "notes," admits that the face of the earth was one of Arctic desolation when he discovered the stings wiped off Tommy's beak, but hunger is a sharp thorn, even in bird life, and a meal was found in a few bees, but not from choice, and had Mr. W. taken Mr. Hiam's seasonable Christmas hint (4608, page 102), and hung up a few bones, he would, I am sure, have looked in vain for the stings. I have now every season about half-a-dozen nests of tits around my apiary, which has grown to a dozen hives, and in 1899 took nine stones of section-honey from one colony situated right under, and only a yard or so away from a nest of tits, so with this excellent confirmation I blotted them out for ever as robbers, and to all bee-keepers this must be proof positive that tits are not enemies of bees.

Accept a Northern wish for a prosperous and plentiful honey-year in 1902 to you all in the South.—W. E. RICHARDSON, *Secretary, Driffield and District B.K.A., Driffield, East Yorkshire.*

P.S.—There is one animal I have discovered to be a lover of bees "dead or alive," viz, the hedgehog, and one summer evening I watched three of these prickly creatures mount my alighting boards and make short work of the busy inhabitants, and there is also one bird fond of a dainty drone or two, but I am too much in their confidence to "give them away."

GENERATION OF WASPS.

[4637.] With regard to the contributions on this subject by Mr. H. W. Price and Mr. W. Loveday in your issues of November 21 and 28 last, I think the following quotation from Réaumur may be of interest. It is taken from a translation of a portion of Réaumur's great work, "Histoire des Insectes,"

contained in Thomas Wildman's "Treatise on the Management of Bees," second edition (1780) :—

"The courtship and the nuptial rites between the sexes are mysteries that have been revealed to me" (says Réaumur) "by means of my glass hives. About the middle of October I saw the females and the males come upon the outside covering of the nest and keep there whilst it was heated by the rays of the sun. I could perceive their coupling performed pretty much in the same manner as that of other flies. I sometimes saw a male wasp in love, moving, as I may say, with a discontented air, now going forwards, then suddenly turning back ; so soon as he saw a female, he ran, he fled with all the wings of love."

Wildman does not quote beyond this point, but from the information contained in the above quotation it will be seen how completely Réaumur succeeded in drawing aside the veil that had hitherto obscured this portion of the life history of the wasp.

The quotation is from vol. vi., page 200, of Réaumur's work, which was produced between the years 1734 and 1742.—A. Royds, jun., *Soberton, Hants, December* 24.

BEE HOUSES.

HOW TO BUILD ONE.

[4638.] In reply to your correspondent G. W. Buttery (4615, page 504), I beg to say the mortise is from the 2-in. mark to end of 7-ft. 10½-in. piece. The 4-in. by 2-in. piece stands on its edge, so that the mortise will be the 2-in. thickness of stuff each way and 1-in. thick. The frame of house rests with bottom-rails on floor ; frame-work to be made so that the outside of frame is flush with outside of floor. The ¾-in. boards will then cover frame and sides of joists, and also keep the whole thing rigid. The floor carries the whole weight of house. I hope this will make all plain ; if not, write again. I would like to call attention to an error, 8 lines from bottom of 1st column on page 487. For "5 in. by 6½ in." *read* "5 ft. 6½ in." I think "W. B." will find that he will have to put a 2-in. piece on back to take one end of square for top-rail of end.—Worker Bee, *Langford.*

INSURANCE FOR BEE-KEEPERS.

[4639.] I am pleased to think an insurance scheme is now likely to become fully established, and that, contrary to the general impression derived from your "Supplement," non-members of county associations will be able to join in all advantages the scheme may have to offer. I believe I am the only member of a county association within a radius of three miles, and that within that radius there must be upwards of 200 stocks of bees beside my little lot of twenty. No doubt there are other members similarly situated, and the question is, "how is this scheme to be brought to the notice of all these non-members ?" I should like to suggest that every village possessing a few bee-keepers should form a Bee-Keepers' Club and combine the whole amount of stocks under one policy, and I feel sure this would bring four or five times as many stocks under the insurance system as the county associations will be able to do, and at the same time effect a considerable saving in the working expenses of the scheme, which I think would tend to make it a greater success.

A bee-keepers' club has many more advantages to offer, such as co-operation in purchase of supplies, the spreading of knowledge on up-to-date methods, loan of bee books, &c., from County Councils, and last, but not least, the good fellowship and interesting chats of its members at periodical meetings.

Tits and Bees. I look on the tit as a very useful friend to the gardener and fruit-grower, searching every part of a tree in quest of moth or other insect pest. I have seen him pick up hundreds of dead bees from front of hives, but I have never seen him attack a live one, and I trust none of your readers will begin a warfare against him till they have satisfied themselves that he does kill the bees, and the evidence up to the present does not, in my opinion, prove him guilty.

Wishing you and all your readers a Happy New Year. — John Arthars, *Studley, Warwick, January* 3.

HYMETTUS HONEY.

[4640.] A friend of mine has been visiting Greece, and has brought home for me a tin of genuine Hymettus honey, which I propose to open and sample at our next B.B.K.A. meeting. Meantime, he informs me that the locality from whence this honey is supposed to come is covered with a small white daisy-like flower, probably camomile. I was under the impression that what is known as "Hymettus honey" was derived from the flower of wild thyme. My tin is soldered up, and therefore I have not yet tasted it, hence I cannot speak as to flavour.—E. D. T., *Eynsford, Kent.*

STARTING BEE-KEEPING.

[4641.] Last September I started bee-keeping with one small swarm, which a friend transferred for me into a new frame-hive.

A week or two later, under his advice, I began feeding with syrup.

We soon had one or two sharp night frosts, and about same time I noticed that the bees deposited on alighting-boards and on two garden frames liquid excrement of a rusty brown colour. Fearing this was a case of dysentery, I took away the syrup and replaced

t with a block of candy. Two of these blocks (1 lb. each) were cleared up before the cold was sufficient to make the bees hibernate. Beyond seeing that there was candy under the quilt I have left them alone. The last time I opened the hive (roof only) was a day or two ago, when I took off the thick quilt (home-made, many thicknesses), brought same into the house, and had it before the fire for hours, replacing same after dark while quite warm. Hope this is right.—CARSHALTON, *January* 3.—[Quite right.—EDS.]

SOME ESSEX NOTES.

[4642.] *Leaking Jars.*—There is a reply by the Editor to D.M., who inquires on this subject in the B.B.J. of December 12 (page 500). He actually also refers to this question in the current number of the *Bee-Keepers' Record.* Last season I used the new wads for jars brought out by Messrs. Lee & Son, and found them far superior to the common cork wads. In fact, I had no trouble with leaking jars last season.

Glass Quilts for Bees.—This subject has been referred to several times recently on pages 506 and 448. I favour a non-porous covering for bees, but find glass suitable for quilts only for those who keep a few hives of bees merely as a hobby. The man who has to live by his bees wants a quilt that can be rolled back with as little noise as is possible. There is so much "Snap, bang! Here we are again!" in using glass as quilts, that the bees naturally fix bayonets and prepare for a charge the moment the glass is lifted. Glass prevents the escape of both heat and moisture above the bees, and my experience is that moisture is not only beneficial to a colony of bees in good condition, *i.e.*, strong in numbers, but that moisture is really necessary to the well-being of the colony. I refer to colonies of bees in good condition advisedly, for moisture that is beneficial to a strong colony would be nothing but dampness and death to a weak one. I hope readers will understand that I refer to such moisture as condenses in the hive, for in no case can moisture be allowed to enter the hive from outside through cracks. Such moisture is death to bees. Personally I use neatly folded newspapers over a calico quilt to cover my bees. Paper neither holds dirt nor harbours vermin, and will last for years.—W. LOVEDAY, *Hatfield Heath, Harlow.*

RAILWAY COMPANIES AND BEE-KEEPERS.

[4643.] Referring to the note of "W. A. H." (4612), B.B.J. of December 19, I have already given my experience of the two rates the railway companies charge. We have a specially cheap rate for farm and garden produce to London—4d. for 20 lb. I paid for honey by this rate, sometimes broken, at others it arrived safely. I received an order for a dozen 1-lb. jars, and packed them with corrugated paper and wood wool, filling the box tightly. I sent at company's risk, and paid 1s. 4d. carriage. One bottle was broken, and after several letters were written to the officials and I had waited six months, I received 1s. compensation. I should advise bee-keepers to send at "owners' risk" and save the extra expense.—W. J. BELDERSON, *Terrington, Norfolk.*

RAINFALL IN 1901.

At Buttermere, in the County of Wilts; Rain gauge:—Diameter of funnel, 5 in. height of top—above ground, 3 ft.; above sea level, 347 ft.:—

Month.	Total Depth.	Greatest Fall in Twenty-four Hours.		Number of Days on which ·01 or more fell.
	Inches.	Depth.	Date.	
January	1·66	0·33	16th	19
February	2·25	0·68	4th	13
March	2·03	0·35	30th	16
April	4·87	0·37	10th	11
May	1·33	0·30	30th	6
June	1·87	0·98	30th	12
July	2·21	0·51	25th	7
August	2·23	1·05	14th	10
September	2·81	0·96	16th	10
October	1·98	0·51	18th	15
November	0·87	0·39	13th	7
December	6·81	1·56	12th	18
Total	27·20			144

W. E. BURKITT.

Buttermere Rectory, January 4.

RAINFALL IN IRELAND—1901.

[Observations taken at Enniskillen, County Fermanagh.]

Month.	Total Depth.	Greatest Fall in Twenty-four Hours.		Number of days on which ·01 or more fell.
	Inches.	Depth.	Date.	
January	3·97	0·48	25th	23
February	1·38	0·34	1st	19
March	3·29	0·58	2nd	16
April	3·20	0·92	2nd	18
May	2·47	0·77	6th	13
June	3·71	1·70	22nd	16
July	2·07	0·71	23rd	14
August	4·81	1·62	10th	21
September	4·00	0·49	19th	21
October	3·48	0·79	18th	23
November	4·45	1·18	11th	17
December	4·13	0·56	7th	25
Total	40·96			226

The rainfall was 2·27 inches less, and was much more evenly distributed throughout the year than in 1900. This year, as is shown above, the greatest fall for any one month was 4·81 in. in August, and the least was 1·38 in. in February. In the previous year the highest monthly total reached six inches, and the lowest was little more than half-an-inch. In 1900 the rainfall of the four wettest months was more than that of the remaining eight; but in 1901, the total for the five wettest does not much exceed that of the other seven.

The mean temperature for the year was 47·6 deg. The highest temperature registered in the shade was 78·3 deg. on July 17, and the lowest 18·4 deg. on March 26.

J. T. ABRAHAM.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

December, 1901.

Rainfall, 4·14 in.
Heaviest fall, ·49 in., on 12th.
Rain fell on 19 days.
Above average, 1·35 in.
Maximum Temperature, 54°, on 7th and 8th.
Minimum Temperature, 20°, on 23rd.
Minimum on Grass, 13°, on 23rd.
Frosty Nights, 19.
Sunshine, 70 hrs.
Brightest Day, 17th, 6·50 hours.
Sunless Days, 12.
Above average, 10·2 hours.
Mean Maximum, 44·9°.
Mean Minimum, 32·6°.
Mean Temperature, 38·7°.
Below average, ·5°.
Maximum Barometer, 30·49°, on 1st.
Minimum Barometer, 28·55°, on 24th.

L. B. BIRKETT.

WEATHER REPORT FOR THE YEAR 1901.

WESTBOURNE, SUSSEX.

Rainfall, 25·96 in.
Heaviest fall ·87 on June 30.
Rain fell on 153 days (average 172).
Below average, 2·87 in.
Maximum temperature, 80° on July 19 and 20.
Minimum temperature, 13° on January 9.
Minimum on grass, 5° on January 9.
Frosty nights, 88 (average 75).
Sunshine, 2,007·6 hours.
Brightest day, July 11, 15·5 hours.
Sunless days, 57 (average 61).
Above average, 147·5 hours.
Mean temperature, 47·2°.
Below average, 0·2°.
Maximum barometer, 30·70° on November 25.
Minimum barometer 28·55° on December 24.

L. B. BIRKETT.

THE HAIRS OF THE BEE.

The body of the bee is covered all over with a compact coating of soft feathery and sometimes downy hairs. Their purpose is no doubt to perform the usual duties of hairs or feathers on live creatures, viz., to conserve the internal heat and thus keep the insect warm. But a great part of this pubescence, as it is called in the case of the bee, performs other marvellous functions. In the newly hatched bee it shows as a soft grey downy covering, but later on it assumes a darker hue, differing in shade, however, according to the variety of the bee. After weeks of hard work it wears off, until from various causes, including old age, the body shows shiny and black with the the pubescence mostly if not altogether gone, and the whole body has become *bald*.

In addition to this common hairy coating many of the organs of the bee are covered all over with tactile and tensory hairs—many of them organs of touch, and several others performing very important duties in the bee's life and labours, both in and out of the hive. Many of them, indeed, spring from a bulbous growth on the skin directly connected with certain nerves or nerve fibres; and these nerves collect in bundles and convey the impression or sensation to the true nerve centres. The tongue, all over, is somewhat closely studded with numerous hairs of various shapes and sizes, which form organs of taste and touch. Many of them are provided with a tiny opening like a mouth at their ends, and several have minute channels running down the centre. The tip of the tongue forms a kind of spoon, and it has a very large number of tasting, touching, and sucking hairs which aid the insect in securing its load of nectar. Several of them are branched, and form so many sucking organs absorbing and carrying forward by capillarity to the tongue the most minute particles of nectar found in the flower. Yet another set of intercrossing hairs form, with a groove in the tongue, a true tube, along which the newly-gathered sweet is carried forward towards the honey stomach. I have already, in treating of the antennæ, stated that these mystic organs are studded all over with an almost innumerable collection of tactile hairs all undoubtedly organs of touch of the most sensitive and delicate order. Many of them are conoid and hollow, and have a nerve fibre, especially those found near the end. They are far more numerous in the worker than in either the queen or drone. On the back the hairs are generally curved, but in front many of them are straight and longer, and are each connected with a nucleated cell. Enlarged sections of these hairs show a wonderful diversity of formation, and a marvellous adaptation of means to an end.

The pollen baskets are really formed by a hollow in the leg covered in with a number of very stiff, bristly, recurved hairs, which act as gatherers of pollen grains, brushes to press it together in a compact mass and as a covering of the pocket to keep it in place until the worker reaches the cell where the bee bread is to be deposited. These hairs differ in shape, texture, and length, according to position and the duties they perform. It will be remembered that bees can walk upside down. The pulvillus is found to contain on its under surface a number of minute hairs terminating in a bulb, and these have the power of exuding an oily or gummy secretion, which steadies the bee and enables it to perform this feat of legerdemain with confidence and perfect ease. All the trophies or organs of the mouth

are provided with sets of hairs. The jaws and lips are thus furnished, and the palpi or feelers of the maxillæ are furnished at the end with peculiar hairs. A great part of the tongue, as has already been noted, is bristling with hairs. When we examine even the internal organs, such as the intestines, the true stomach, and the honey sac, we find each of them with a diverse set of hairs, not for ornament, but use. Taking as an example those at the lips of the honey stomach, we find them pointing downward in such a way that any pollen grains which may find their way thus far amongst the honey cannot be regurgitated when the honey is deposited in the cells. I suppose very few bee-keepers ever dream that the hairs of the bee perform so many different offices, and it will be a surprise to many to find that they are of any other use further than acting as a covering. But we have seen that another set are true organs of touch; others act as suckers; some form tubes, some brushes; others form baskets, some sieves, others feelers. Another series are regular oil-cans, self-acting and self-regulating; while those on the sinus act as combs, polishers, and cleaners.—D. M. M., *Banff.*

Queries and Replies.

[2773.] *Buying Diseased Stocks of Bees.*—I am sending a piece of comb for your inspection, and will be glad if you will tell me through B.B.J. if it is affected with foul brood? I have just found out that the stock from which the comb comes has perished, leaving very few dead bees lying about the hive. Do you think they have joined another colony? I am a beginner in bee-keeping and I bought the hive referred to last September, and was given to understand that it was a swarm that went in of themselves and took possession of the old combs in the hive at the time. I recently noticed that bees were robbing the stock, and upon examining found the swarm of bees had deserted the hive. There was plenty of stores left, but I think the comb is very old and ought to have been burnt years ago. The floor-board was covered with larvæ of the wax-moth.—A B.B.J. Reader for Three Months, *Bath, January* 3.

Reply.—We regret to say that you have made a very bad start in bee-keeping, for your purchase of the above-named stock in September last was about as disastrous a thing as could have been done. The comb sent is perfectly rotten with foul brood, and as it "contained plenty of stores," the robbing noticed will probably have carried the disease into your other hives. This trouble, though not yet actually realised, is pretty certain to follow. The old combs in the hive when the swarm hived itself therein would no doubt be diseased, and as the hive now stands it should be burnt; combs, quilts, and frames, not a vestige of it left. You had better make yourself acquainted with the nature of foul brood before taking any steps towards remedying the unfortunate start made.

[2774.] *Working Shallow-Frames.*—1. In working shallow-frames for honey, placed one above the other, please say what space should there be between the two sets of frames? I want to suspend them from the sides of the hive, instead of using a box. 2. Do the bees like shallow-frames best without the bottom bar, so that they can seal their honey right down on to the bottom of the comb? The hive is made in one piece.—W. Johnson, *Birtley, January* 3.

Reply.—1. The proper space to allow between bottom bars of super frames and top bars in those hanging below is a bare $\frac{3}{8}$ in., or, as a joiner puts it, $\frac{1}{4}$ in. *full.* 2. The bees have, we think, no particular "likes" in this direction, but the bee-keeper, if he is wise will—for obvious reasons—have his combs built in a complete rectangle, *i.e.*, a frame with top, bottom, and side bars. We may also add a word of advice to our correspondent, to work his shallow-frames in boxes, instead of suspending them from the hive sides.

[2775.] *Working for Sections* versus *Extracted Honey.*—Because each issue of our weekly, the B.B.J., and its monthly, *Bee-Keepers' Record*, illustrate the gentle and fatherly treatment courteously meted out to us querists, I feel emboldened to trouble you with another query, seeing that, although there are within reach of me many who allow bees to keep themselves, there are none—so far as I know—sufficiently experienced, to whom I might go in confidence for advice in the following case:—I recently purchased from a "model" apiarian a well-made hive—a "W. B. C.," of course, for, like "ping-pong," this hive seems to be the rage at present. It had but ten frames, with no room for a dummy, and as I wish to use eleven frames in brood-chamber, please say, through the medium of the B.B.J.:—1. May I place the outside frames $1\frac{1}{4}$ in. from centre to centre, for by that means I could easily get in the eleven and a dummy, and at the same time still permit the rearing of drones in the several inner frames? The opinion of the inventor of the hive on this point will be a helpful and reliable guide to me, because I am having several "W. B. C." hives made at home immediately. Just another question:—2. If a hive is worked for sections, and we suppose that one hundred 1-lb. well-filled sections are obtained in a season, how many pounds would it probably have yielded if worked for extracted honey?—William Richards, *Gabalfa, Cardiff, January* 6.

Reply.—1. If the "outside frames" happen

to be well stored with food (as outside combs usually are), it would hardly do to place them only ¼ in. apart, seeing that the faces of upper parts of combs might be too close for a bee-space; consequently, the bees would require to eat their way upwards by cutting down the depth of cells. We should preferably remove one frame and space out remainder to take in the dummy. But why not make the hive to take eleven frames in lieu of ten? 2. It is generally supposed that when ready-built "store combs" are preserved for use each year the bees will yield at least 30 to 35 per cent. more honey for extracting than when sections are worked for.

[2776.] *Returning Undesirable Swarms.*—I am a novice in the art of bee-keeping, having started in September with one frame-hive and a driven lot of bees. Since then I have been a regular subscriber to B.B.J., and also have Mr. Cowan's "Guide Book." Next season I am anxious to obtain section honey from my hive, and shall do all I can to prevent swarming. But in case I had a swarm, could I return them to the hive? I cannot find information on this particular point in the "Guide Book." Is it simply a matter of destroying the old queen which issues with the swarm, and returning same to the hive on the evening of the day on which they come out, keeping them in a skep in the meantime? If you will kindly enlighten me, I shall feel extremely obliged.—E. T. Griffin, *Bolsall Heath.*

Reply.—You should first read up what is said in "Guide Book" (page 62) with regard to prevention of swarming. Then go back to page 20, where a short chapter appears on the same subject. The knowledge thus gained will be helpful on the general question of swarm prevention. For the rest—and in reply to your suggested destruction of the old queen and returning the swarm—it would not prevent the bees coming off again eight or ten days later, headed by the most forward of the young queens due for hatching. Your best plan would be to hive the top swarm, and the old queen at its head, on four frames of foundation, and give them all the unfinished surplus-chambers from the parent hive to complete. When the honey season is over—if it is only intended to keep one hive—the bees of the parent colony may be added to the swarm after removal of the old queen.

[2777.] *Bee Associations for Helping Beginners.*—I am quite a beginner at bee-keeping, having commenced by studying "Modern Bee-Keeping," and buying a stock hive last April from a bee-keeper in the neighbourhood. He gave me all possible help and advised me to take your Journal, which I have done ever since. In July, I had the satisfaction of seeing thirty-six beautiful sections taken from my one hive and then decided to divide my bees into two hives. I fed them until the end of September, and am now waiting most anxiously to see how my first attempt at wintering will succeed. So far all appears to be going well, and my fears of last week at seeing many dead bees outside the hives, are removed by reading in your current issue that this is an ordinary occurrence at this time of year. I should like, if possible, this summer, to manage my bees alone, but I feel so much a novice that I shall be glad if you will tell me if any knowledge is to be obtained by belonging to an association, or what are the advantages; also if there is one sufficiently near Mitcham to be of any use to me.—(Mrs) Clara Davison, *Mitcham, Surrey, January* 4.

Reply.—You happen to have in your county one of the most active and useful bee-keepers' associations in the kingdom. The Surrey B.K.A. has its local experts in every district, and by writing to the hon. sec., F. B. White, Esq., Marden House, Redhill, and becoming a member, we have no doubt he will put you in the way of securing all the help needed.

[2778.] *Insurance for Bee-keepers.*—I see this is against accidents or damage caused by owners' bees outside apiary; but what does this mean; claims by strangers for damages after robbing you of a few stings? How can any one fix the responsibility?—T. K., *Carshalton, January* 3.

Reply.—The onus of fixing responsibility lies on the plaintiff who sues the bee-keeper for damages in the county-court. All that the proposed scheme of insurance does is to assist the bee-keeper in meeting the amount of damages awarded, together with the legal costs incurred.

Echoes from the Hives.

Honey Cott, Weston, Leamington, January 3.—Echoes! Yes, echoes! friend "J. D.," though I cannot remember you personally, I do not think it is all £ s. d. that keeps some of us from "echoing" occasionally—as stated on page 8—but time now moving on with such irresistible swiftness makes one more inclined to shirk even sending a few lines for an Echo to the B.B.J. However, I am now writing to say the last few days have been very mild, with the bees flying in great numbers, and by the looks of my hive-entrances and fronts of floor-boards, and on the ground very few dead bees have been cast out, considering the sharp frost we had, even in November, when the thermometer registered 18 deg. of frost one night, and 12 deg. and 14 deg. several times. But, for myself, I rest content and am satisfied the bees will be all right, as they had a good supply of food when packed up for autumn. I can fully endorse what has been said about "Mr. Tom Tit." My opinion of him is that he is a great rascal,

deserving no mercy when flying down to the entrances and snapping up any bees that appear there; even going so far as to pull away loose blocks that had been laid to partly curtail the space of some entrances and throwing them on the ground. While I have my pen in hand I should like to ask where are our old friends Alfred Rusbridge (near Chichester), Friends Baldwin, Martin, Tom Sells, Grimshaw, and many others that I cannot remember their names now? Wishing all readers a happy and prosperous New Year.—JOHN WALTON.

Icklesham, Rye, East Sussex, January 6.—Yesterday (Sunday) the bees had a grand flight; how they hummed! and what a pleasant sound it was, one which only bee-keepers or lovers of Nature can thoroughly understand. Such sounds when heard in winter carry us back to the summer that has departed, and fill us with hopes for the future. Last year was a good one here for the bees, and may the coming season be as good, or even better; but there, as our friend "J. D." wrote in his echo last week, £ s. d. is the consideration nowadays. Well, one needs some return for their trouble, even if to make the labourer worthy of his hire; but if I only got enough honey for home uses I would keep bees as a hobby. To-day I gathered wallflowers and stocks and pansies. Wishing you a happy New Year and a prosperous one.—HENRY CLARKE.

Hill House, Canterbury, January 6.—My Bees were kept in the hives here for thirteen days during the late frost, but all my colonies had a good turn out to-day; and so far as numbers outside and about the hives allow of reporting of their condition at present, they appear to promise well for 1902.—EDWARD P. BETTS.

Lancaster, January 1.—Just had a peep at my stocks (eighteen); found all alive and in good condition.—W. LIDDELL.

BEE-KEEPING

AS A RURAL INDUSTRY.

The following useful article on "Bee-keeping as a Rural Industry" from the pen of our esteemed contributor, "D. M. M., Banff," appeared recently in a Banffshire paper, and is so full of interest to bee-keepers generally that we have obtained permission to reprint it as follows:—

Many of our minor rural industries receive far less care and attention than they deserve, and this is largely true of bee-keeping. In these times of agricultural depression, when farmers have to do their utmost to keep their heads above water, any aid to rent-paying is eagerly seized on. Here ready at hand is the kindred subject of apiculture, which, properly studied and carried out on modern and scientific lines, yields excellent returns for the time and expenditure necessary for its successful initiatory start. The bee itself, with its wonderful example of industry, is a fascinating study, and the interior economy of the hive deserves our hearty admiration. The exactness of the comb-building is a model of perfection in architecture; the internal government of the hive might teach "the art of order to a peopled kingdom"; and the produce of the bee is the sweetest of Nature's gifts—of old described as "food fit for the gods."

As a home hobby or pastime no other more pleasurable or health-giving can compare with it, while it has the further important recommendation of being a paying one. Especially for those leading a sedentary life no better can be found, as the time devoted to it is spent in the open air, with Nature and all her works for a study. The bees lend a new meaning to the flowers, and we take additional interest in their beauty and grace when we look at them accompanied by the sweet murmur that comes to us heavily laden with the perfume of honey, for the bees are fed on Nature's purest and richest offering—the soul of the flowers. "Bees summon man to the gladness of June, to the joy of the beautiful months, for the events in which bees take part happen only when skies are pure. To him who has known and loved them a summer where there are no bees becomes sad and empty as one without flowers and birds." The care and attention requisite to the successful keeping of bees continue only during a short time in each year; but when the "bee fever" seizes on one, the necessary time for manipulations is considerably added to by pleasant observation of the habits of the insect, and much agreeable time may thus be spent profitably. If the bee-keeper has a turn for amateur carpentry, additional pleasure and profit may be derived from this branch of the pursuit, and, with suitable models in hives and appliances to work from, most of the articles required may be home-made, and this always adds zest to the pastime.

The old skep is fast becoming extinct, and frame-hives are wisely taking their place. The former was a sealed book whose interior was never open to observation, and so, once run in, the bees wrought their own sweet will. Modern frame-hives enable men to become the bees' masters; and their owners can manipulate them as he pleases, and, certain laws being observed, can make them obey his will. Without slaughtering them in the old barbarous way over a gulf of "blue sulphurous flame," he can take their spoils and make them his own, leaving them only sufficient to live on. Honey, too, comb or extracted, can be secured of the purest, instead of the conglomerate compound got from the skeps, which was formed of propolis, old comb, bee bread, and young larvæ. In the way of surplus takes modern methods far exceed the old in quantity

as well as quality. A gentleman near Forres (Mr. Archibald, of Firlands) frequently secures about 200 lb. from his best hives, and from an extensive apiary he generally has an average of about 100 lb. A lady bee-keeper in this county (Mrs. Anderson, Cushnie, Gamrie) records a harvest of over 1,000 lb. from ten hives, and in the far south Mr. A. Muir, Kirkcorwan, has had "takes" of 4,000 lb. from forty hives in one season. A bee-keeper from the upland parts of Banffshire reports just over half a ton of surplus honey from twelve hives during 1901. These high returns (quoted from the BRITISH BEE JOURNAL) might be multiplied, but as they are altogether exceptional it would be folly to lead new aspirants in the pursuit to think otherwise. An average of 30 lb. to 40 lb. per hive may be set down as a very good return for a series of years.

Many parts of Scotland besides Banffshire can boast of a fair supply of two out of the four chief sources from which bees gather honey, and an excellent and most abundant supply of the other two. Fruit blossom in the early season yields well in certain favourable years; but all over the weather is so uncertain that most seasons it is lost to the bees. Here and there in our county lime or linden trees, where grown in sufficient numbers, yield a copious supply during the latter days of July. In certain years they almost drop nectar, and no more welcome sound to a bee-man's ear can be heard than the bees' multi-millioned hum in an avenue of limes. Such favourable spots are, however, rare. The main source of supply here, and perhaps all the world over is white or Dutch clover. This prince of bee plants adorns our fields all June and July, and the courses of rotation followed by most of our farmers are admirably suited to a prolific growth of this excellent honey-yielding plant. But the king of bee flora is our own native heather, and nowhere is the supply more liberally scattered than all over the greater part of our county. Leagues and leagues of it stretch in an unbroken expanse of rich purple bloom, yielding honey of the richest and most delicious kind, forming food fit for the table of a king. Too little of it is secured for man's use, and too much of it is allowed to "waste its sweetness on the desert air" for want of willing bee tongues to suck it up. Apiarists rejoice in a large return, for this luscious sweet finds a ready sale, and at a price generally about double that obtained for clover or flower honey.

Bee-keeping has an extensive literature of its own. Away as far back as Homer's time it received due recognition; and Virgil devotes his Fourth Georgic to bees and bee-keeping. The number of "bee guides," "bee manuals," and "books on bees" published in France, Germany, the United States, and Great Britain is legion, but only one or two need be named. In America the standard book is Root's "A B, C, of Bee-Culture." In this country Cowan's "Guide Book," a practical work of special excellence, and his "Honey Bee," dealing with the scientific side of the subject, are recognised as indispensable to any one desiring to prove successful in modern bee-keeping. There are two papers specially devoted to bees published in London—one, the *Bee Record*, a monthly at 2d., and the other, a weekly, the BRITISH BEE JOURNAL, at 1d. Many magazines and a host of newspapers devote a special column to the subject. The papers above named, written by bee-keepers for bee-keepers, should be taken by all who wish to go in for up-to-date bee-keeping. Local bee associations exist all over the country, making it their object to foster and extend the pursuit. Scotland possesses several doing excellent work, though the Central Scottish Bee-keepers' Association has become defunct. England, and even Ireland, fare better, as they have active and efficient parent associations in London and Dublin. The majority of English counties possess county associations, most of them doing good work. The English central association, known as the British Bee-keepers' Association, has offices in London, with a paid secretary and an influential body of gentlemen forming an active working Council, with the Baroness Burdett-Coutts as President. It does a large amount of admirable work in advancing the best interests of the cause, disseminating a knowledge of the best bee practices and literature, aiding members in finding a market for their honey, holding a number of show, annually in London and the provinces examining and testing experts and lecturers, and, with the aid of a model apiary, teaching advanced apiculture. Many of the County Councils give £50 to £150 a year for lectures and bee-van work. At the shows valuable money prizes and medals are given for honey, honey products, and bee appliances. In October alone four important honey shows were held—at the Agricultural Hall, London, in connection with the Grocers', Confectioners', and Dairy Shows respectively; and one at the Crystal Palace. The South of Scotland can also boast of several important honey shows. We in the North are not so well organised. We have a few excellent bee-men, who make bee-keeping a success financially, and considerable quantities of the very finest honey, commanding the highest price in the market, are sent from our county every year. Yet, large as the quantity may now be, it is only a tithe of what could be secured. It is safe to say that tons might be produced where the bees now gather stones. What the industry wants is organisation and combined effort. A county association, under the fostering care of several of our county families would do a vast amount of good in developing and extending the pursuit. It is undeniably one of the best-paying of our minor home industries, and many a small farmer, crofter, cottar, labourer,

and tradesman might not only pay his rent, but secure for himself and his family many small luxuries from the produce of a few hives of bees.—D. M. M., *Banff.*

PRESS CUTTINGS.

BEES AND ROUNDHEADS.

A curious old farmhouse in the neighbourhood of Camelford has lately been destroyed by fire. It had once been the mansion of the old Cornish family of Trevillian, long since extinct. In the days of the Parliament wars a party of Roundheads came there to seize the squire, well known as King Charles's man. "Begone," he shouted. "If you dare come on I will send out my spearmen in your teeth." They laughed, and they did come on. He flung a beehive among them! Next day Sir Bevil Grenville gave the Roundheads a great deal to think of at the battle of Stamford Hill; therefore it came to pass that they troubled Trevillian no more.—*Modern Society.*

HUMBLE BEES AS ATTITUDINISERS.

Humble bees are commonly supposed to carry the palm in attitudinising. It is wonderful to see the grotesque motions of these irascible insects when their nest is approached, elevating their abdomens and two or three legs at a time, so that they resemble a troupe of acrobats balancing themselves on their heads or hands, and kicking their legs about in the air; and to impress the intruder with the dangerous significance of this display, they hum a shrill warning or challenge, and stab at the air with their naked stings, from which limpid drops of venom seem to exude.—From *The Naturalist in La Plata.*

HONEY IN AUSTRALIA.

The genial climate of Victoria makes it essentially a land of flowers, which bloom all the year round. As a consequence, bee-keeping is carried on in the State under exceptionally favourable circumstances. Up to the present no special attention has been given to the export of this, but its cheapness, purity, and excellence when tried by consumers will, it is believed, eventually lead up to a large demand for it in Great Britain. The bees require no artificial feeding during the winter, so that the honey produced is of the finest quality. It can be imported to the United Kingdom at such prices as would enable it to be sold to consumers at lower values than those which have been realised for the product of northern countries (where conditions of production are not so favourable), and a guarantee can be furnished regarding its absolute purity.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** *Special Notice to Correspondents and Subscribers.*—It will greatly tend to assist us in the new year if correspondents will kindly attend to the instructions printed on inside page of cover with regard to addressing communications properly, *i.e.*, to "Editors" or "Manager," as the case may be, and write all letters for print on *one side of paper* only. Business letters should also be written on separate sheets from those intended for Editors.

We also ask subscribers to note that, as names and addresses are now printed (not written, as before), we have to discard the "coloured wrapper" for notifying overdue subscriptions, and in lieu thereof substitute a couple of blue pencil marks on the postal cover. These marks will be continued on every issue till the arrearage is cleared off.

By attending to these matters much misunderstanding will be avoided.

NORTHERN SCOT (Glasgow). — *Inverness to Foyers as a Bee District.*—We forwarded your note to a B.B.J. reader located at Inverness who is conversant with the locality referred to, and he has been good enough to say in reply:—"Referring to the note sent, Foyers is about eighteen miles from Inverness, and for about eight miles of the way I should say it is a grand district for bees; but when you get to Loch Ness there is only one side to be counted as forage ground, the Loch being too wide for the bees to cross with advantage. From that point I should think heather was the only crop from which benefit could be expected. I rather think that the reason so few bees are kept between Foyers and about five miles of Inverness is the generally exposed situation, and the few sheltered spots that are to be found out of the reach of the high winds, not only for protecting the hives, but where the bees can work from their hives to the nectar."

J. R. W. H. (Chili).—*Bees in Chili.*—We shall be very pleased to publish any contribution of interest you may favour us with on bee-keeping in Chili.

WORKING BEE (Langford).—*Bristol, Gloucester, and Somerset B.K.A.*—You will obtain information re secretaryship of the above association on application to Messrs. Brown & Son, Seedsmen, Bristol.

A. WHITTAKER (Walsall).—The only "complete list" of our bee publications appears in the advertisement pages of Cowan's "Guide Book."

Editorial, Notices, &c.

THE "ROYAL" SHOW OF 1902.

On another page of this issue we print the prize schedule for the Bee Department of the "Royal" Show at Carlisle, wherein it will be seen that the date on which the show will be held—Monday, July 7, to Friday, July 11—is later than for several years past. This welcome fact will tend to remove, in some measure at least, a cause of just complaint by bee-keepers, viz., that a honey show held at a time requiring removal of surplus-honey from hives by the second week in June spoiled the chance of nine-tenths of would-be exhibitors of the current season's produce.

We therefore trust readers will note the fact, and prepare their entries accordingly.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of December, 1901, was £1,039.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

*** ***In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

NOTES BY THE WAY.

[4644.] A fortnight of mild weather has given the bees ample opportunities for cleansing flights, and a re-arrangement of the food requirements, or a move of the cluster to the adjoining combs of honey. It has also afforded a chance to the beekeeper for inspecting the condition of wraps and cushions, and drying the same if wet, or replacing damp quilts with dry ones while renewing the cakes of soft candy as needed. All these jobs can be done without disturbing the bees, after which entrances should be cleared out with a piece of bent wire to remove any accumulation of dead bees not carried out by their living comrades during the late inclement weather.

Whenever the sun has been shining of late, the apiary has resounded with a merry hum, and the "spotting" on the roofs of hives after the first flights plainly attested the necessity of a climatic change for the bees' sake.

Wax Moth in Hives.—I always consider Mr. Hamlyn Harris's "Gleanings from Foreign Bee Journals" one of the most interesting features of our journal, while the experiences mentioned are familiar to most of us who have worked among the bees for a long period. In this district we are troubled with the wax moth. Only last season my advice was asked by bee-keepers living from three to six miles distant from each other, and each about the same distance from myself, about wax moth, and in every case the hives I saw were one mass of larvæ and cocoons of the moth webbed together. In one case a few straggling bees just inside the entrance of a straw skep on a piece of new comb of honey; in another a frame-hive, the combs of which were a mass of wriggling moth-grubs, while the frames were firmly fixed together by layers of cocoons woven in between the sides of frames and the sides of hives. When the mass of cocoons were forcibly pulled away, grooves could be seen eaten out of the wood as though it had been marked with a tree-cutter's scribing-iron. The remedy is "fire" for all the parts except the hive, and it is safest to remove the inside walls, as the moths may have deposited eggs in the crevices, and the resultant larvæ may develop between the outer and inner walls.

"*Soot*"-*gathering* (?).—I have many times noticed bees carrying in pollen as black as soot. I have also frequently seen bees, three or four at a time, flying about the tops of our chimney-pots; indeed, I have known them find their way down the "copper" flue and fly to the inside window of the wash-house. These bees were seen to be dusty with soot; but their first job was to brush the dust off their antennæ and out of their eyes. I do not, however, believe they ever *gathered* soot, but have inclined to the view that the moving smoke irritated them, and that they were in a pugnacious mood.

A few years back I purchased some honey from a bee-keeper who was also a wheelwright, and after he had painted a van with very dark-coloured paint the bees were observed collecting the paint as it was drying, and they used this stuff as propolis; consequently, the sections were "travel-stained" considerably with their dirty feet.

Tall v. *Square Sections.*—I notice that Mr. Clay (4634, page 11) has a good word to say *re* the tall sections. I had already heard from a friend that the first prize went to tall sections at the Shrewsbury show. Possibly the new style took the fancy of the judges, and thus secured a point or two as against the old style. As regards the new section "selling better," possibly they may, seeing that, comparatively, they appear to be a bigger quantity

for the money, especially when staged side by side with the no-bee-way section. But when the public comes to consume these tall, thin sections—in which full sheets of the advertised tough foundation is used—they will find a larger "gob" (as our American brethren term the lump of wax left in the mouth after eating). Another point which I trust will be borne in mind is this: If all bee-keepers adopt the tall thin section, where will any advantage to the craft come in? We may spend a goodly sum of money in purchasing new appliances, or in adapting our present racks to produce these sections, only to find that we are not adding anything either to the pleasure or profit of beekeeping. My contention is that by the proposed change we shall add somewhat to our annual expenses every year, with no prospect of any corresponding gain to compensate for the increased outlay. In the first place, the sections will be higher, comb-foundation will cost more, and glazing, or box-making will also cost more. Besides, "Tate's cube sugar boxes" will not take three layers of tall sections, and will consequently require alteration entailing further expense and time. In my opinion, therefore, the general adoption of the tall section will still further reduce our profits, and this, with the possibility of keener competition and overstocking of the market. I notice in print that there is a good market in England for Canadian section-honey, and have no doubt this arrives under the "favoured nation" rate of freightage. Let us, as bee-keepers, look the matter squarely in the face, consider it in all its bearings, and decide in the interests of our craft to support the best system for the benefit of all.—W. Woodley, *Beedon, Newbury.*

MAETERLINCK AND THE DRONE.

[4645.] It is not surprising that Maeterlinck's "The Life of the Bee" should have been received with approval both within and without the circle of bee-keepers. The book is indeed delightful reading. On the other hand, the novice in bee-craft may well be reminded that its author, to whatever extent he may have devoted himself to the study of bees, is, first and foremost, a dramatic poet, and that dramatic colouring, however effective, is not conducive to accuracy.

For instance, on page 35 we read of "the ladies of honour who wait on the queen, and never allow her out of their sight." This implies a permanent guard; whereas the queen picks up attendants as she moves along, and these seldom follow her beyond the limits of the comb on which she attracts their attention—a fact well pointed out in the *Edinburgh Philosophical Journal* by the Rev. W. Dunbar, who was the first to keep bees in an observatory hive on modern principles in the year 1820. He called it the "Mirror Hive." Any one who cares to take the trouble can satisfy himself of the correctness of the observation.

In the account (page 192) of the hatching out of the young bees, Maeterlinck endows the workers with a feeling of sympathy that I do not hesitate to say is at variance with fact. "On the young bees attempting to gnaw their way out," he says, "the nurses at once come running; they help the young bee from her prison, they clean and brush her, and at the tip of their tongues they present the first honey of the new life. . . . She instantly makes her way to the cells that are closed, and proceeds to beat her wings and to dance in cadence, so that in her turn she may quicken her buried sisters." But in truth, the young bee very seldom gets any help in emerging. It is often trampled upon and impeded, and when it has struggled out, is left to shift for itself. It does its own cleaning and brushing. If it puts out its tongue for honey it generally gets it, but more usually it helps itself from the nearest cell. The latter part of the quotation must pass as a poetic flight of fancy.

On page 149, the worker is made to "seize with mouth and claws one of the eight scales that hang from her abdomen," the admirable pair of pincers with which the worker alone is endowed for this purpose being thus ignored.

I pass on to the drones, and had it not been for the treatment they receive from Maeterlinck I should not have thought it worth while to pen these criticisms. This is how he describes them: "Three or four hundred foolish, clumsy, useless noisy creatures, who are pretentious, gluttonous, dirty, coarse, totally and scandalously idle, insatiable and enormous." In the black-lettered pages of past centuries, when little was known of the economy of the hive bee, and writers loved to point a moral and adorn a tale, you will find no such abuse of the poor drone as this. Scene-painting it may be; a heavy black background, to bring out the immaculate worker in a full and shining light; or perhaps to justify the woeful retribution on the drone that our author conjures up on page 287, when "the envoys of justice" (obviously a gang of hornets hired for the job) "vigorously proceed to cut off his wings, saw through the petiole that connects the abdomen with the thorax, amputate the feverish antennæ, &c." But is the wholesale abuse justifiable on any grounds, especially from a modern bee-keeper. The drone does what nature has fitted him for, perhaps, and as Mr. Brice has suggested, there are more uses for him than we have been able so far to divine. He feeds well to keep himself robust and healthy. Is a stallion grudged the good oats he consumes?

The ultimate origin of *Apis mellifica* is one of Nature's secrets. No philosopher shall tell us how many thousands of years it has taken to produce such a marvel as our hive bee. Can Maeterlinck adduce another in-

stance of the sexes becoming so differential in a species that all the good qualities are to be found in one sex only? And if not, then how has such marvellous perfection been reached in a race saddled throughout the long years with a male element so utterly vile as the drone he pictures to us?

On page 113, our author brings a specific charge against the drones, which has much astonished me. Having said of the workers that "they will perish by thousands of a terrible bowel disease rather than sully the hive," he proceeds: "The males alone are incurably careless, and will impudently bestrew the surface of the comb with their droppings, which the workers who hasten behind them must systematically remove." Searching through many treatises, I have found only one other author who brings this charge against the drones—namely, Messrs. Dadant in the 1890 edition of "Langstroth's Hive and Honey-Bee." On page 83 it runs: "The comparatively large volume of the male organs, in connection with the gluttony of the drones" (*Oh, man, proud man, dress'd in a little brief authority!*), "explains why they void their dejections in the hive, while the workers retain them until they are on the wing." Messrs. Dadant are a good authority; but when I quote against them from Mr. Cowan's "The Honey Bee" most readers of this JOURNAL will be satisfied. Page 112 we find: "The fæces of the drone are also ejected on the wing, and are of greyish colour, from the nature of his food." *Also* means as in the case of the workers.

The point, although not such as one would select for discussion, is of some importance in the physiology of the bee, and it is not very creditable to bee-keepers that it should be open to doubt. I will therefore further refer them to vol. i. of "Bees and Bee-keeping," page 148, by that most painstaking author, Mr. Cheshire, where we find: "The queen is an exception, so far as her capability of removing the intestinal residua is concerned, as her ovaries occupy the space taken by a pair of large air sacs in the worker and drone, so that she on foot, and for an obvious reason, possesses the power the others only acquire when on the wing." To this I will only add, as bearing on Mr. Dadant's opinion, that although the generative organs of the drone are large, his abdomen as compared with queen and worker is large in proportion. It contains one additional segment and two more spiracles, and the tracheal apparatus is altogether more fully developed. Hence the inflation of the air sacs, obtainable only when on the wing, and without which the desired muscular pressure to effect evacuation cannot be exerted, is quite as indispensable to the drone as to the worker; and, to carry the argument a little further, it is more than probable that if the drone were to neglect to fill his pouch with honey before leaving the hive in pursuit of the object which is at once the crown and the ending of his existence, he would, when the moment arrived, be unable to effect his purpose.

So much for theory. I hope that readers of the B.B.J. will give their practical experience. There must be many who, like the writer, are in the habit of working for comb-honey without excluder zinc. Have they found their sections defiled? For myself, I may say that during the last two seasons I have specially observed drones in my six-comb observatory-hive. I have watched them for hours clustered on pure white comb, but never then or in motion have I seen them foul the hive, nor have I seen any sign of Maeterlinck's army of worker scavengers. It might be thought that, in moments of excitement, the drones do what is charged against them, but I have often seen them running excitedly in the white-floored passage leading from the hive, and nothing of the kind has happened.—H. J. O. WALKER (LIEUT.-COL.), *Leeford, Budleigh Salterton, South Devon, January* 10.

SOME ESSEX NOTES.

[4646.] *Tits and Bees.*—I hope your several correspondents (who write on pages 12 and 13, 4635, 4636) will allow me to assure them that I fully satisfied myself that tits catch large numbers of live bees before taking the steps referred to in my previous notes. My bees are in just such hives as are recommended by "C. H. Tomlinson," with the combs $2\frac{1}{2}$ in. or 3 in. from the front of hives and entrances $\frac{1}{2}$ in. deep let in the floorboard, yet the tits pick and scratch at the hive entrances till the bees come to see who is there. Mr. Richardson says he "watched the tits that had nests in his apiary for hours." This shows that your correspondent fails to fully understand the subject under discussion. I never saw tits touch bees in summer even when they rear their young in the apiary. The tits only take live bees from October to March inclusive, they then pair and do not afterwards catch bees, for there are other insects of far less trouble to catch to be had for the picking up. I hope those readers of the B.B.J. who are not satisfied that the tits are enemies of bees have read the "echo" from Mr. John Walton in last week's JOURNAL.

Insurance for Bee-keepers.—Many bee-keepers seem to be under a misapprehension about this; apparently thinking that it is intended only for those who have tried to help themselves by joining a bee-keepers' association. I did not take it so, but have no doubt that there are others who, like myself, thought that bee-keepers' associations were expected to report to the B.B.K.A. how far their members support the scheme by filling in the form enclosed in the B.B.J. and sent it off to the hon. sec. of their county or local B.K.A.

Hymettus Honey.—With reference to the letter on hymettus honey (4640, page 13), pro-

bably Mr. Till has the genuine article; but a few years ago a clergyman in Ireland advertised honey for sale in the B.B.J. as "Mount Hymettus honey." There may be several places with this name.

Bee-houses.—These have been referred to in the B.B.J. nearly every week of late. For my part I would say, bee-houses can be useful in right hands, but they so very often get into *wrong hands.* Nine out of ten of the bee-houses that I come across are occupied more by the refuse of the apiary and the garden than by bees. More attention to general cleanliness is necessary if bees are kept in a house than when the hives are in the open. A day or two after reading an inquiry of the Editor of the B.B.J. about bee-houses last autumn I went a few miles from home to inspect an apiary, most of the hives being in a house into which a joiner had put some good work, but I should say the joiner was not himself a bee-keeper, for the moment that I placed a foot inside the door there came a long buzz from every hive. In that house were mice, wax-moths, and hundreds of their larvæ, some colonies of bees being destroyed by the latter, and the combs so webbed together that all of them could be lifted out in a lump. There were also wasps and numerous pairs of big spiders in this house, and to these might be added all the broken appliances of the apiary. Last, but most serious of all, there was foul brood in the hives.—WM. LOVEDAY, *Hatfield Heath, Harlow, January* 13.

INSURANCE FOR BEE-KEEPERS.

[4647.] As I do not belong to any Bee Association I am enclosing the form (duly filled in, &c.) to you. I am sure every bee-keeper is under a great obligation to all who have brought about this scheme. I hope that every bee-keeper will avail himself of, to my idea, a remarkably cheap rate of insurance. I shall do all in my power to make the scheme known amongst non-readers of JOURNAL.

The past year has been the best for honey I ever had, having procured about 1,000 sections.

It was quite a grand sensation, taking off crate after crate of prime sections, well sealed, and the wood very clean.

It was also a problem how to sell it, and that at a good figure, seeing that the market was glutted with honey. One large firm sent word they were buying at 5s. 6d. doz.

I gave myself a good shake, and with one of my best sections nicely got up and very clean I took train to town, nothing doubting, and with the exception of two calls, I sold over 20 doz., getting 9s. per doz. I have had many repeat orders, and to-day I am practically sold out.

Some of my customers told me the price was a bit high, but on account of the cleanliness they preferred to have them. Some sections I saw exposed for sale were a disgrace to a British bee-keeper. The edges dirty and wood all propolis and stains. As long as they turn sections out in this unbusinesslike manner so will their prices suffer.

I wonder how these 'prentice hands would like their bread wrapped up in a dirty paper. I guess they would soon change their baker; and yet it is on the same lines.

Re subject of packing, &c., and carriage, a customer told me he had sent to him a crate of sections by rail, simply wrapped up in brown paper and at owner's risk (to save 6d). The consequence was that honey was all spoilt and a dead loss, and bee-keeper not able to claim. I suppose this bee-keeper will grumble at the railway company.

I am convinced of the fact that if British bee-keepers turn out their honey *clean* and nicely got up there is a bigger future than ever for the profession. I am a very successful bee-man from a financial standpoint (making all my own appliances), and I confess with pleasure that I owe my success chiefly to the BEE JOURNAL and "Guide Book." As to the pleasures of the craft, the half has never been told.

At some future time I hope the subject of marketing honey will be gone into with profit to all concerned.—YORKSHIRE DRONE.

ACTION OF FORMALIN ON FOUL BROOD.

[4648.] Professor B. Galli-Valerio has found that hives infected with Bacillus Alrei may be effectively purified by the action of formalin vapour. The applications are frequent and continuous. The formalin is applied by means of a spray apparatus, specially constructed for the purpose.

Those wishing to study the subject must refer to "Centralblatt. Bakt. 1te Abtheilung," xxix., 1901, pages 127-9, 2 fig.

The above is gleaned from the Journal of the Royal Microscopical Society of London.—R. HAMLYN-HARRIS, *Zoological Institute, Tübingen University.*

(*Correspondence continued on page* 26)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Beyond welcoming Mr. Hepworth—whose apiary and himself are depicted on next page—as a bee-keeper of the right sort, and one of whom we cannot have too many among our readers, we need add nothing to the practical notes sent to go along with the picture of his bee-garden in print, which read as follows :—

"As I am purely a child of Cowan's 'Guide Book' and BRITISH BEE JOURNAL, no expert help being attainable in this district, the enclosed photo and accompanying

notes on my experience may be of interest to yourself and readers.

"The 'fever' took possession of me in 1889, and I started by purchasing four empty hives and one rather weak stock, which swarmed the following year. One way and another, by purchase of driven bees and swarms, I increased my stock to about forty hives (since reduced to thirty-two), ten of which I have located about two miles away on a farm belonging to a brother, where capital forage is accessible in the way of white clover and limes.

"I have during my experience not escaped that arch-enemy of the bee-keeper, foul brood—more through the negligence of a neighbour than carelessness on my part, for I love my bees, and they are ever my first consideration.

"It may interest your readers if I relate how I in two seasons radically rid my apiary of the pest. I first tried the plan of running the bees into skeps, keeping them without food for a time. The stocks, however, were so strong and the weather so warm, that on examining them later I found three lots smothered! As fifteen hives were affected, and even a danger of the disease spreading, I adopted the plan of running the bees off one hive on to a few clean combs into a perfectly clean hive, allowing the bees to starve for a day or two. I then shook them off on to new foundation and fed up. I repeated the operation in the case of all fifteen hives. This was just at the end of the honey season, so that the bees had ample time to get well established in their new quarters before winter. Next season I examined the hives with fear and trembling, and found to my joy only two stocks slightly affected. I adopted the same plan, and with eminent success, for not a trace of the disease have I discovered since. I am a pretty busy man—make all my own hives, frames, &c. My immediate neighbourhood cannot be called one of the best of bee districts; however, during the past season my stocks have averaged 50 lb. apiece.

"I have a ready sale locally, disposing of my honey over the counter of a small grocer's shop which my good housekeeper and a little niece, who appear in the photograph, manage for me.

MR. JOHN HEPWORTH'S APIARY, NEWMILLERDAM, WAKEFIELD, YORKS.

"The windows appearing in the picture are those of my workshop—I am a shoemaker by trade. I have a large expanse of glass, under which I grow tomatoes and plants of various kinds for sale.

"All my success I owe to a careful study of the 'Guide Book,' and to the many valuable hints I have gleaned from your most interesting JOURNAL.

"I always look forward with pleasure to Mr. Woodley's 'Notes by the Way'; he is so practical, and ever ready to share with your readers whatever he has himself found useful in the management of bees.

"I will conclude by wishing yourself and readers a happy Christmas and a good time for the bees in 1902!"

CORRESPONDENCE.

(*Continued from page* 24.)

RAILWAY COMPANIES AND BEE-KEEPERS.

[4649.] Having a claim for damage to honey against a railway company, I am naturally interested in the correspondence in the B.J. upon that subject; and, as my claim was allowed, I thought some others might like to know the particulars, which are as follows:—About the middle of September last I purchased a gross of sections from a bee-keeper in Cambridgeshire, and they had to travel by rail from Newmarket by G.E.R. to Bexhill, B. and S.C.R. The first consignment of fifty-six sections arrived on September 24 considerably damaged, the honey running out of the crates. The goods manager at Bexhill, whom I went to see, informed me that sections of honey ought not to be sent by goods train, being too fragile to stand moving by any kind of conveyance at all. He also expressed his "fear" that my claim for compensation would not be entertained, but I could send in a bill "if I liked." Well, I did like, and sent in my claim, together with a notice stating that if it was not paid in a month I should take proceedings in the County Court. In this I acted on the advice of a friend experienced in such matters. I received a reply to the effect that the company refused compensation on the ground of the goods being duly signed for as delivered in good condition. However, I happened to know that it was entered in the company's books as damaged and leaking, so I wrote again demanding payment, and this time increasing the amount of my claim to three times the sum asked in the first instance, for in the meantime the other eighty-eight sections had arrived, and these latter were damaged far worse than the first lot. I received a reply saying that my claim would be considered, so I decided to await the decision in patience. I was, a few days ago, on the point of sending another loving epistle, when I received a letter from the company, accompanied with cash in full settlement of my last claim, while still refusing to give any compensation for the first damage done. But I do not intend giving up my first claim, and am making another attempt to recover for that. Should I succeed I will be very pleased to let you know. I suppose, however, it will be some time before it is settled.—W. ROBERTS, *Ninfield, near Battle, Sussex, January* 9.

"ECHOES FROM THE HIVES."

[4650.] Referring to the mention of my father by Mr. John Walton (who writes on page 18), I am fortunately able to tell where "Friend Grimshaw" is, as I see him (and work with him) every day except when he is travelling. His time is now too much occupied as senior partner in a nail-making firm to give much attention to literary work. However, he is still interested in bees, and has this winter already given two lectures on the subject, and has two more to deliver this month, one at Pateley Bridge and the other at Benley in Wharfedale. His friends will see, though, that when he has his business to attend to, it leaves very little excess energy.

We both embarked in the hobby together in the spring of 1886, and I have always had a "few" bees since, with the exception of about a year or so, when I left the paternal roof and got married.

I know my five stocks are amply provisioned, &c., so I am leaving them severely alone, anxiously looking forward to the return of spring flowers and work "amongst the bees."—DARCY R. GRIMSHAW, *Crossgates, near Leeds, January* 10.

DISTRICT B.K. ASSOCIATION.

BOURNVILLE (BIRMINGHAM) AND DISTRICT.

[4651.] I think there is a great need for a more active association in this district, and will be glad if those interested in the subject will kindly forward their names and addresses to me, with a view to the formation of a bee-keepers' association for Bournville and district. I have now several friends wishing to join, provided sufficient numbers can be got together. We consider there is little of either interest or advantage in belonging to an association whose centre of working is at Worcester or Warwick.—FRANK TILLEY, 44, *Beech-road, Bournville, Birmingham, Jan.* 10.

"CAN BEES HEAR?"

[4652.] Referring to the article in the BEE JOURNAL of November 28 last (on page 475), in which your correspondent, Mr. Homersham, comes to the conclusion that bees cannot hear, I shall be glad of an explanation of the following points:—1. When you pinch a bee it utters a discordant note, which soon brings more bees to the rescue. How did the pinched bee communicate with the others if not by hearing? 2. Before a "cast" comes off, say, on the seventh or eighth night after swarming, you can distinctly hear the cries (or, as bee-keepers call it, "piping") of the queen. Now, if bees cannot hear, how do they know the meaning of her cries? 3. When a swarm is thrown down upon the floor board, you can distinctly hear the queen's cries and locate her. If the bees cannot hear, what is the use of sound given them for? Any information upon the above will be acceptable.—GEO. RICHARDSON, *Cowbit-road, Spalding, January* 8.

[We print the above in this column rather than as a query for editorial reply, because we could only give our individual opinion for what it is worth on the question, "Can bees hear?" This would be in no way conclusive, seeing that it is a moot point among the

highest authorities. We, therefore, hope to see the question discussed in our correspondence column, trusting that some useful and practical information may be evolved thereby.—EDS.]

CONVERSATIONS WITH DOOLITTLE.

UNITING BEES FOR WINTERING.

"Good evening, Doolittle. As the evenings are getting quite long now I came over to have a little talk with you about uniting bees, so as not to bother you during the day, as I know you are very busy getting your honey ready for market."

"For what reason do you wish to unite your bees, neighbour Smith?"

"I have several weak colonies and young after-swarms which I thought would, by placing two or more of them together, make a less number strong enough for winter; and I believe that such strong colonies can stand the winter, while the weak ones, if left to themselves, would most likely perish. Am I right in this matter?"

"I think you are; and if more of our bee-keepers so understood things we should hear of less loss of colonies in the spring than we do now. The novice is apt to think that, the greater the number of colonies he begins winter with, the more he will have the next May; but a careful examination of results shows that such reasoning is fallacious. Two or more small colonies placed in one hive, with the right amount of stores, stand a fair chance of probably coming out in the spring a good working colony; while, if left separate, the empty hives and combs will probably be all that remains the following month of May."

"That is my view exactly. But you have not told me how to unite my bees."

"I will tell you of a plan that I have used successfully for a score or more years. The first thing to do is to place an empty hive where you wish a colony to stand; and if where the stronger of the weak colonies is now standing, so much the better, as in this case the bees from this one will have no desire to go to any other place, this being their old home."

"But how can I set an empty hive there when the stand is already occupied?"

"Quite easily; on some day when the bees are not flying, and yet not cold enough to chill bees generally, say, when the mercury stands at from 50 deg. to 55 deg., you will have no trouble in setting this stronger colony to one side of its stand, and taking your time in arranging the empty hive thereon."

"Yes, I see now. But go on."

"Having the empty hive arranged, go to the several hives having the colonies which are to be operated on, and blow a good volume of smoke in at the entrance, at the same time pounding with the doubled-up hand, or with a stick, on top of the hive."

"What do you pound on the hive for?"

"Because the 'pounding' causes the bees to fill themselves with honey, and upon this filling depends the successful uniting of bees."

"How long should I pound?"

"I continue it for about a minute; sometimes two, should the weather have been cool for some time before, so the bees are quite compactly clustered, as in this case it takes them some time to cluster and fill themselves."

"Do you keep on smoking the bees while you are pounding the hive?"

"I smoke only enough to keep them from coming out after the first few good puffs. When you are through with the last one, take a wheelbarrow and wheel the hives to where you wish your united colony to stand, which wheeling helps, by its jarring, to augment the fear of the bees, thus causing them more effectually to fill themselves with honey. Do not delay in opening the hives, or the bees may disgorge their load of honey back into the cells again."

"Would not an assistant be useful at this time?"

"One would do no harm; but I generally work alone. Having all requirements near to the hive they are to go in, open the hives, and take a frame of comb and bees from one hive and place in the empty one; then take a frame from the next hive, placing it beside the first, and so keep on alternating the frames from the different hives till the empty hive is filled. In doing this, select such combs as you desire, either for brood, honey, all worker comb, &c., thus putting the united colony on the best combs. Having the hive filled with comb, close it, when you will next take a frame from the first hive opened, and shake the bees off from it down in front of the entrance, holding close down so the bees are in or as near the entrance when leaving the combs as possible.

"Why this close holding and shaking?"

"In order that the bees will take wing as little as possible, and none need fall so far from the hive but that they can readily run in with the majority. After having got them off the first frame, next shake the bees from a frame on to the next hive, and so on, alternating in the shaking the same as in filling the hive, thus mixing the bees from the several hives all up."

"Why do you wish them mixed up?"

"Because it takes the disposition to fight and kill one another all out of them when filled with honey as above, for when each bee touches another it is a stranger, so that the individuality of each colony is lost, and the combined two, three, or four colonies unite within two or three hours to make one individual colony again, which will protect itself from all intruders, the same as the separate colonies did before."

"Is that all there is of it?"

"Not quite. As soon as the bees are all shaken off their combs gently blow a little

smoke on the outside bees to make them all enter the hive should any be slow in doing so; and as soon as all are in the hive place a board about half as wide as the hive, against it, standing the bottom out a piece from the entrance, so it stands slanting up over it."

"What do you do that for?"

"This is done so that the next time the bees fly they will bump against it, as it were, this causing them to know that it is a new location they occupy, when they will mark the place the same as a new swarm does, after which they will adhere to it instead of going back to the old location they used to occupy before uniting. And to help in this matter further it is always best to remove everything from the old stands, so that nothing homelike remains to entice them back."

"What about the queens? Do you put them all together?"

"Should there be a choice of queens in any of the colonies to be united, kill or dispose of the poorer ones, so that the best may be preserved. This hunting-out of the queens is better done some day before the uniting, for in the smoking and pounding process the queens will not be where they are readily found when uniting. If there is no choice in queens, and the extra queens are of no value, the bees will attend to the matter, killing all but one of them."—*Gleanings* (American).

Queries and Replies.

[2779.] *Improving Colour of Beeswax.*—I have been told that there is some plan of improving the colour of beeswax by the use of chemicals during the process of melting. Is this so? And do you know anything of the method, as I have some wax that needs improving in colour?—"CHESHIREMAN," *January* 10.

REPLY.—We suppose there will be as much practical experience in cleaning or improving the colour of beeswax at the works of the A. I. Root Company in America as anywhere we know of, and Mr. E. Root says with regard to the process:—"Sometimes a 5 per cent. solution will do the work; then as strong as is required—that is to say, 1 part raw acid to 10 parts water; but if the wax is very dirty or black, you may require to use as high as 25 per cent. Use acid enough to get the yellow colour. It is cheap; and when you have secured the proper colour you can make your wax enough more valuable to more than pay the expense of the acid."

[2780.] *Working the "W.B.C." Hive.*—1. Where can I see the proper working of a "W.B.C." hive? 2. As, I understand, you are the originator of the hive, you could advise me how to work it for section honey only. I never work for extracted honey, and therefore do not require shallow-frames such as are sent out with the hive by dealers. Could I put sections in the box made to hold the shallow-frames? 3. When you start working in the spring, do you put this frame on the floor-board and then place the brood-chamber or body-box on that? I also note that a box containing sections in hanging frames is used with this hive. How are they put on? 4. The frame or "eke," 2 in. deep, also sent with hive—is this only used in *winter?* 5. I find there is only ¼ in. space between end of frames and the hive-sides. Do you consider this enough, as some people say it should be ⅜ or ½ in.? I want to work the hive right, and therefore would be obliged for any information to enable me to do so.—F. JELLICO, *Mountmellick, Queen's Co., Ireland, January* 4.

REPLY.—1. If by "proper working" you mean a properly constructed "W. B. C." hive, such may be seen at the works of any good hive-maker in England. No doubt there are dealers in Ireland who supply the hive, and if yours is one of these the maker will surely be able to explain the working of its various parts. 2. Bee-keepers who work solely for sections surely will not order boxes of shallow-frames, but purchase only the "W. B. C." section-boxes with proper hanging-frames therein for holding the sections. 3. We do not quite understand this query as written. 4. The "eke" is 3 in. deep (not 2 in.), and is useful for several purposes other than for space below frames in winter. 5. A ¼-in. space between side-bars of frames and hive sides is perfectly correct.

[2781.] *Painting Hives.*—I have just commenced bee-keeping this new year, and have purchased seven "W.B.C." hives with bees in, and seven empty ones. Also one lot of bees in a skep to keep for swarming. I got the lot for £10. I should like to paint them all over with two coats of paint, but would first like to know if you think it would do any damage if I paint the hives while the bees are in them? As I am doubtful, please give me your opinion in B.B.J. The man I bought the bees from gave me a copy of the "Guide Book." I am a signalman on L.N.W. Railway. Wishing you and all bee-men a happy and successful new year.—J. B.

REPLY.—By painting the hives in cold weather, or in the evening, all entrances may be closed during the operation and until the paint has dried. In this way no harm will follow.

[2782.] *Examining Hives in January.*—During the last few days the weather has been so mild here I have opened my hives and given to each a large cake of medicated flour-candy. Each hive appeared strong in bees, and during the short glimpse I had I fancied I could see plenty of young ones. 1. I send some bees I picked up outside the hives, and should be much obliged if you will kindly tell me the strain, whether they are young or

last season's? 2. In making my flour-candy (according to Recipe No. 3 in the "Guide Book"), I was not quite clear as to quantities Is it intended that 1½ lb. of wheat flour or 1 lb. of pea-flour should be used to each 6 lb. of sugar, which is the amount of sugar mentioned in No. 2 recipe? 3. Is this too early in the year to give flour-candy?—"GLADYS," *Devonport, January* 14.

REPLY.—1. Bees sent (Ligurians) are last season's adults, not young ones. 2. By reading the "Guide Book" carefully you will not go wrong in making flour candy. We cannot improve on the directions there given. 3. The month of January is too early for any disturbance of bees, either by feeding or otherwise, unless the real necessity arises. Hives are best left "severely alone" at this time.

[2783.] *Making an Observatory Hive.*—Can any of your readers oblige with details of construction to make an observation hive, and say which is the best size for watching the bees at work? I thought of one to take two standard frames, or two frames and three 1-lb. sections; but would not mind if it held three frames or more The BEE JOURNAL containing plan and details for making the "W.B.C." hive has been very useful to me—along with others I am sure—and I should like similar particulars regarding an observatory, if such are obtainable.—W. C., *Cleckheaton, January* 10.

REPLY.—"Details" of how to make an observatory hive, with plans such as you refer to, could only be supplied by a practical hive-maker, who could hardly be expected to do this to the injury of his own trade. For watching bees at work a four-frame observatory is quite small enough.

Echoes from the Hives.

Brook Hall, Londonderry, January 7.—The weather here has been mild, but wet and windy, with little frost and snow, and consequently favourable to the bees. My bees, during the short spells of winter sunshine, indulge in what we bee-keepers call "cleansing flights," otherwise the bees are at rest. I always keep a cake of candy under the quilts, as I believe the bees should have some within their reach, even if they are not destitute of stores. I also take care not to disturb them except on a sunny day, and then only to examine how the cake of candy is getting on. I am busy making ready for the coming season, cleaning and repairing supers and hives, and making new ones during the long evenings. The winter is about half through now, so let us hope the spring will be an early one, with plenty of blossoms and flowers.—G. F. GILLILAND.

Hatfield Heath, Harlow, Essex, January 13, —I took advantage of the recent mild weather to give to all stocks that may possibly want their stores supplemented a full 2 lb. cake of soft candy. I make these cakes three or four at a time, so as to be able to give them to the bees warm. I also gave additional coverings to all stocks at the same time. Now, whether it snows, rains, or blows, the bee-keeper need care little, and the bees less. I found the bees strong in numbers and lively too; so much so that several of them made an "impression" on me in the "usual" way. I fancy the wind irritated the bees and made them a bit vicious, for it was very windy, though mild. Did I examine the combs for brood? No, and had no desire to; but I took the opportunity to drop naphthaline in at back of all hives, also to add to the candy a solution that it is hoped will prevent the baby bees being found indisposed when it is safe to examine them. Saw the first bee in search of water on January 5, and have seen a number since. To-day it is 15 deg. colder, so I quite expect that—to use a common country saying—as the days lengthen the cold will strengthen.—WM. LOVEDAY.

PRESS CUTTINGS.

A GOOD WORD FOR THE WASP.

To the Editor of the *Standard*.

SIR,—The above heading, no doubt, explains why nothing has been said in defence by the queen wasp to the charges made against her in the correspondence you have been good enough to print. The widowed queens are all asleep, most of them in such an unconscious state that you will find their motionless bodies simply anchored to some substance which they have seized with their jaws. When they wake up in genial spring weather, and, perhaps, gain access to some file of the *Standard* to select, if they can, something to mix and chew up with the scrapings from the gates and palings, they will be highly amused at some of the ideas prevalent concerning them and their life history, and indignant that, amid much abuse and plans of murder and destruction, not a word has been said on their side, not a single vote of thanks accorded to them for the immense amount of indirect benefit they bestow on your ungrateful correspondents.

Wasps are omnivorous; in addition to the supply of their own daily wants, they have to collect food for an innumerable number of grubs as they hatch out in quick succession from the eggs the queen lays. Nothing seems to come amiss, and in the early spring insects are rare, and the pollen and honey of the few blossoms about probably provide the only available nourishment. The quantity of food carried to a thriving colony may, perhaps, be imagined when we find Sir John Lubbock telling us that a marked wasp paid ninety-four visits to a store of honey in one day. If you stand at the entrance of a wasps' nest you will find the workers going out and returning in

quick and regular succession. Little of the carried food will be visible, for the wasps masticate and disgorge it for the grubs' food. Later on in the year insects swarm; the butcher has all he can do, and more, to prevent his meat getting fly-blown; the grocer has his sugar and other goods defiled with numberless pilfering flies; the gardener's roses and other choice plants are infested with green fly and other pests. Your own study becomes uninhabitable from the annoyance of the ubiquitous fly; some of the ten thousand species of European flies attack your fruit, doing almost as much damage as the wasps. In spite of the fly's purpose in Nature, which, we are told, "is to consume various substances which are given out by the human body, by articles of food, and almost every animal and vegetable production when in a state of change, and given out in such small quantities that they are not perceptible to common observers"—a most useful purpose, no doubt—we cannot help disliking the "intrusive, buzzing, pilfering, boozing, tickling varlet," and common gratitude demands our thanks to the industrious wasps.

To a nest, say, 2,000 workers, in their ninety-four daily visits, are carrying some 198,000 execrated pilferers and tormentors, or, to 100 nests, in a radius of two miles, are carrying 19,800,000 a day. Think of life without this protection! This number will allow, if you please, a liberal discount without ruining the plea. We have a keen perception, and so has the sparrow, of what the destruction of hawks, owls, weasels, and other adjusters of the balance of power in Nature has done. Who can picture the results attending the extinction of the wasp family? Shall they not be welcome to a share of our fruits, and may not an occasional sting be borne with patience, when we remember our comparative freedom from the irritating attacks of other insects?—I am, Sir, your obedient servant, JOHN H. HOCKING, F.E.S., Copdock Rectory, January 9.

"THIS WAY TO THE HONEY."

One of the African birds performs a very pleasant duty, as its name of honey guide shows. They lead the natives to the bees' nests in the woods and elsewhere, in the hope that they may be allowed not only a share of the honey, but also full freedom to feed on the larvæ, or grubs, and eggs in the nests. Some folks have accused them of being wicked enough to guide men not to the honey, but to the dens of savage beasts. This is, however, totally untrue; although the birds have, like the cuckoo, the bad habit of laying their eggs in other nests than their own, giving strangers the trouble of hatching them and rearing the chicks.—*Science Siftings.*

BEES AS POSTAL MESSENGERS.

It is said that a great English apiarist has succeeded in turning to account the homing instincts of bees for the conveyance of messages. He took some bees a long way from their hive, gummed to their wings a tiny micro-photographed letter, and set them loose. They all found their way safely home. In time of war these postal bees would have this advantage over carrier pigeons—it would be impossible to shoot them!—*Picture Postcard.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

C. M. (Stanford-le-Hope).—*The "Standard" Frame.*—Our correspondent writes:—"We bee-keepers—who belong to Associations—look up to you as our guide in things connected with bee-craft." He then goes on to say:—"I have received circulars, &c., advocating the use of a hive much bigger than the 'Standard,' and running the latter down," and finally asks:—"Is there anything in it beyond bunkum? because I am half inclined to try a larger hive than the 'Standard,' but want to hear your opinion before I do so."

In replying, let us first say there is no such thing as a "Standard hive," and no fixed rule regarding size or *capacity.* The hive we advocate may be made to hold any number of frames according to the district or the desire of bee-keeper. But when we are asked for "guidance" on the desirability or otherwise of doing anything tending to lessen the enormous advantage conferred on the pursuit by the adoption of the B.B.K.A. "Standard" frame, we repeat what we have said scores of times in this journal, viz., that any advocacy of either a larger or a smaller frame than that now in general use must come from other quarters or other journals than the B.B.J. In other words, we should regard a change as rank folly almost approaching to absurdity. How any one can shut their eyes to the enormous advantage gained by the adoption of a uniform frame, fit for use, and interchangeable with those now hanging in any hive in the kingdom, is a mystery to us. So long, therefore, as readers are good enough to "look to us for guidance," we shall advocate no other.

*** *A few Queries, not urgent, are held over till next week's issue.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Thursday, the 16th inst, Mr. F. B. White occupying the chair. There were also present Major Fair, Dr. T. S. Elliot, Messrs. W. Broughton Carr, H. Jonas, J. H. New, W. F. Reid, W. J. Sheppard, T. I. Weston, and the Secretary. Letters apologising for inability to attend the meeting were read from Miss Gayton, Hon. and Rev. Henry Bligh, Messrs. R. T. Andrews, W. H. Harris, P. Scattergood, and E. Walker.

The following new members were elected, viz.:—Mr. Jas Arthur, jun., Greengairs, Airdrie, N.B.; Mr. R. W. Brimacombe, Colebrook Lodge, Putney Heath, S.W.; Mr. S. Darlington, Charing, Kent; Mr. Joseph Thomas, Whitehorse-street, Hereford.

The Chairman presented the Report of the Finance Committee, giving account of receipts and expenditure to date, and brought forward the list of accounts presented for payment. The report was adopted.

A letter was received from the Nottinghamshire Association, and after discussion, the secretary was instructed to reply thereto in accordance with the decision of the Council.

Amongst other correspondents was a letter fram the Agricultural Commissioner of the Royal Hungarian Government, requesting the co-operation of the Association in acquiring different types of English bee-hives for the exclusively educational purposes of the Royal Hungarian Agricultural Museum, and the secretary was directed to ascertain whether models of ancient or "up-to-date" appliances were desired, and to deal with the application accordingly.

A very lengthy discussion ensued on the proposed Insurance scheme, and a number of letters on the subject were dealt with, notably one from Mr. W. H. Harris, who suggested the following salient points for consideration:—1. The desirability of making quite clear the scope of the insurance—just what risks will be covered. 2. The inclusion of non-members of associations in the benefits of the scheme, at an increased premium. 3. The formation of village bee-clubs, the members of which might pay individual fees or a lump sum from the club funds.

The replies received to date were considered satisfactory, and included a large proportion from bee-keepers who, from various causes, are not connected with Associations. The Council will, upon ascertaining approximately the number of bee-keepers desiring to join in the scheme, proceed to draft a schedule of "Rules and Regulations" for circulation, and, in doing so, will take into account the valuable suggestions to hand from all quarters.

The next meeting will be held on Thursday, February 20.

MARRIAGE OF MR. T. B. BLOW.

NOTICE OF MARRIAGE.

On January 15, 1902, in London,
Before the Superintendent Registrar,
Thomas Bates Blow, of the Chalet, Welwyn,
to
Shoko Koyake, of Kyoto, Japan.

The above — in some respects novel — "wedding card" reached us on the 16th inst., and we take the earliest opportunity of cordially wishing every happiness to Mr. and Mrs. Thos. B. Blow.

Those who have been readers of this journal for any length of time will remember Mr. Blow as one of the best-known and most successful of our bee-appliance manufacturers, besides being a practical bee-expert, owning a large apiary at Welwyn, Herts.

After disposing of his extensive hive-works a few years ago, Mr. Blow has travelled a good deal in the East, particularly in Japan, to which country he made several journeys, his visits extending over long periods. Those who, like ourselves, have kept in touch with Mr. Blow will not be surprised at his connecting himself permanently with Japan and its people as announced above. Familiar with the language, and wearing, as he did, the native dress when there, he was, we suppose, as much at home in Kyoto, Japan, as at Welwyn, Herts. Indeed, we have many times heard our friend express his appreciation of the many admirable traits of character apparent among the educated classes of that interesting country. In again expressing our good wishes for Mr. Blow and his Japanese "good wife," we shall no doubt be joined by a large number of our readers.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

A CONVERSATION WITH MR. G. M. DOOLITTLE.

"WHEELING" EXPERIENCES IN AMERICA.

[4653.] While staying with Mr. F. A. Salisbury, in the city of Syracuse, N.Y., I heard that Mr. Doolittle lived in a somewhat inaccessible spot eighteen or twenty miles away over the hills. Now was my chance to see one of the most famous bee-men living. It was an opportunity not to be missed, and I determined

to take it, although I had no definite invitation from him, nor had I any certain knowledge that he would be at home. Mr. Salisbury kindly lent me his "wheel," and I got a lift "on the cars" for about half of the way, as far as a village called Skaneateles. The village lay at the head of a beautiful blue lake, which, though no more than about two miles wide, extended for some twelve miles in a southerly direction. I found out that Mr. Doolittle lived at a place called Borodino, about eight miles from Skaneateles, near the eastern shore of the lake. I was advised to take the lake-shore road. Although it was the gloomy month of November, the morning was superb. The sun shone brilliantly on the somewhat hilly but very fertile and unusually interesting and prosperous-looking country on my left, and on the clear, smooth lake on my right. I was unable to fully account for the very marked degree in which I experienced the feeling of exhilaration and buoyancy of spirits, that is usually associated with morning rides in a bright and cool atmosphere, until I learnt (as I afterwards did) that the district I was in was many hundreds of feet above the surrounding country, and that the lake was fed, not by mountain streams, but by springs, the contents of which welled up into the lake from great depths. As a consequence the water is so pure that the whole of the city of Syracuse, twenty miles off, is supplied with the water of this lake; and the citizens are justly proud of their splendid water-supply. Though the road was quite dry, it was in a very bad state for cycling. It was, of course, only an ordinary American mud-road, but it was a new experience to me to drive a bicycle through dust and sand 6 in. thick, hard ruts 2 in. deep, holes, loose pebbles in the sand, and, on some of the steep hills, ledges and steps of rocks protruding from the sandy dust. My opinion of American bicycles has undergone a complete change, for no bicycle has ever before received, with me, rougher treatment from the roads than Mr. Salisbury's did that day. It was an old, hard-worn looking machine, but it stood the test splendidly, and I came to the conclusion that either British cycle agents have been deceiving us about the durability of American machines, or else the American manufacturers have been supplying the British market with their cheap "junk," and have thus earned for themselves a reputation that they might easily improve.

Of course, I had a good look at the country as I passed through it, and was particularly interested in the crops. It was chiefly grass land, but there was a good deal of corn (maize) and one or two fields of cabbages. I was specially struck by some particularly fine, thick-trunked specimens of what I supposed to be the Lombardy poplar, or an allied species having the same tall, upright, Irish-yew-like habit of growth. There were no neatly-trimmed hedges of hawthorn, nor was there any ivy to be seen. Both these plants would, I understood, be "winter-killed" by the severe snaps of hard frost to which this part of the country is liable. Wooden fences generally took the place of hedges, but in some places I saw some very tall hedges of the thorny locust-tree (honey-locust) as I neared Borodino. This tree bears numerous thorns about 2 in. long. Near the tops of some of the best-grown specimens several large clusters of long chocolate-coloured bean-like pods were hanging; they were quite hard and dry, and made a weird rattling sound as they rubbed together in the light breeze which had now sprung up. Compared with our sturdy hawthorn, the honey-locust seemed to have a weak and straggling habit of growth. This must be a great apple-growing district, for there were several well-grown trees laden with good eating apples, of that deep tint peculiar to most American apples, standing on the roadside between the honey-locust hedge and the road. Evidently the apples were public property, and, being thirsty after my ride, I climbed one of the trees and refreshed myself by eating a good many of them, and I put some more into my pocket. At last I spied, in a valley a short way off, a neat white house, which I took to be that of Mr. Doolittle. I was soon there, and I found it was occupied by Mr. Doolittle's sister, who told me that her brother lived next door. He had been out fishing in the lake, and he intended driving to the village in the afternoon, but, she said, I might find him at home then. Fortunately, I did find Mr. Doolittle at home. He emerged from his workshop as I walked into his apiary.

I knew him by his picture in the "A.B.C. of Bee Culture," and I hastily introduced myself. Doolittle, as I saw him, is a elderly, well-built man, with sandy hair and moustache. He is somewhat fleshy, and he laughingly said, in allusion to this, that bicycles were not made for him. He had an unusually powerful voice. His thoughts and words flowed so rapidly that I had some difficulty in keeping pace with them, and sometimes of comprehending his meaning. He was, however, exceedingly explicit whenever I requested him to repeat anything he had said. The first thing we did was to look at his bees. Mr. Doolittle took a small piece of touchwood and, fixing it on the end of a wire skewer, set it well alight. He then dropped it into his Corneil smoker with some more pieces of the same material, and, armed with this and two bee-hats, we sallied forth to the bees. Mr. Doolittle has about ninety colonies of bees. He uses a small, square frame, the "Gallup," measuring $11\frac{1}{4}$ by $11\frac{1}{4}$, and he spaces the frames with his fingers. For sections he seems to prefer a four-piece tall section, the size of which is $3\frac{1}{4}$ in. by about $5\frac{3}{8}$ in.

The sections were placed in a hanging frame, and tin separators were attached to the frame. Mr. Doolittle gave me a message for British beekeepers, which I will repeat here while I remember it. "If you tell them nothing else

from me," he said, "impress on them the importance of having a full force of working bees in the field *at the right time*." I told him I would have much pleasure in doing so, for I knew that the advice he gave was one of the greatest secrets of success in honey-production, and though realised by all, it is seldom acted upon to the full.

Mr. Doolittle is, of course, chiefly famous as a very prolific writer on bee-keeping and as the author of "Scientific Queen-rearing," in which work he described his famous methods of queen-raising and the artificial queen-cell cup which was invented by him and bears his name. His method of queen-rearing was one of the first really successful ones, and his experience in dealing with queens and in doing all kinds of queen-work is almost unique. He described to me an absolutely safe method of introducing a queen to a nucleus, which may be new to some of your readers :—The nucleus is, of course, first made queenless, and then in the evening a large number of the bees are shaken off the combs into a box covered with wire-cloth, through a large funnel placed in a hole in the top of the box. Next morning the queen is given to the bees in the box, and the following evening the bees are returned with the new queen to the nucleus.

Mr. Doolittle winters his bees in a cellar, which he has constructed in the side of a hill behind his house. On the hill behind the cellar he showed me a grove he has of young basswood trees. The basswood, *i.e*, American lime, or linden (*Tilia Americana*), is one of the best sources of honey in America. The honey is of excellent colour and consistency, and there is a peculiar pungency about the flavour which causes those who once learn to like it to be always afterwards very partial to it.

Mr. Doolittle was most kind in explaining to me all kinds of appliances and methods; he showed me the little room where he did all his writing, the walls of which were well decorated with a large number of newspaper cuttings. The four hours or so I spent with him passed like a moment, and the sun was already getting low when he wished me good-bye. It was, in fact, too late for me to catch the last train that day from Skaneateles, so I set out for Marcellus, a station much nearer to Syracuse. Night fell long before I got to Marcellus, and the road being very bad and hilly, I ventured to ask a passer-by how far it was to Marcellus. He said I had five miles more to go, and in answer to question I asked as to whether the road was good, he replied, "Well, not bad." This sounded ominous, and, as I expected, the sandy dust soon got deeper, and before long I found myself being brought to numerous sudden standstills by what I believed to be pebbles in the sand. At last I had to walk. Then the road suddenly got smooth and firm. I mounted my "wheel" again, and was going along splendidly in the dark (I had no lamp) when I was suddenly almost thrown off by a new and more serious danger than any I had previously encountered. In the gloom I could just perceive what seemed to be some six or seven narrow, straight grooves in the road, each of them about a foot apart and running parallel with one another from one side of the road to the other. They seemed to vary from 1 in. to 2 in. in depth. Apparently they were narrow buggy-wheel tracks, but why they should have covered the road and been so straight and equidistant from one another I could never make out. I was indeed thankful when I got to Marcellus Station, or, as it is called in America, the "railroad depot," although it was here that I had perhaps the worst experience of all. The station was in a valley at the bottom of a steep hill, and the road crossed the railway track without any barrier. The darkness was too great for me to see the railway track until I actually reached it, and then I was going at so great a speed, acquired going down the hill, that I could not stop my machine in time to prevent its bounding over the two rails which, like those of this country, projected high above the sleepers. How I stuck to the machine and how the rims and tyres of the wheels remained whole are mysteries that I cannot explain. And when I got into the "depot" I heard that the train was "on time," and that it was due in two minutes! However, I had almost ten minutes to wait for it.—F. W. L. SLADEN, *Jan.* 20, 1902.

BEES AS FERTILISERS.

IMPROVING THE FRUIT CROP.

[1654.] The following "Note" regarding my beginning with bees and the result thereof may be of interest to some who, like myself, grow fruit. I started last April, without any previous experience, only having studied the "Guide Book" got from you. I had two stocks of bees, each in a hive holding ten Standard frames.

From one hive I took a frame containing 9 lb. of pure honey on May 30, but this was all the surplus this colony yielded, as the bees never took to the supers. They swarmed on June 18 with an empty section-rack on, and, later on, swarmed again and lost their queen, a mishap I did not find out till September. I then got another queen and safely introduced her so that she had started breeding before I closed the bees down for winter.

From the other stock I got twenty-five 1-lb. sections and 12 lb. of extracted honey. Then on June 18—as in the case of the first-named hive—a swarm issued and the two swarms united of themselves. I took from this lot 12 lb. of honey in shallow-frames.

I got the bees in the first instance for the purpose of fertilising the fruit blossom in our garden, as for several years we have noticed the absence of insects at that time though they are plentiful in July and August. The result was in every way a success, for this year we

had a record crop of Victoria plums, and our pears were much better than usual. Apples, gooseberries, raspberries, strawberries, and blackberries were not appreciably different; but, of course, the season for fruit has been good all round, and one cannot say for several years what is to be placed to the credit of the bees.

My district, in the heart of the blackest part of the West Riding, can never be a first-class place for bees. I only know of one other bee-keeper within about seven miles.—WILFRID CROSLAND, *Oldfieldnook, Cleckheaton, Yorks, January* 18.

RANDOM NOTES.

[4655.] Cold outside and warm within! The desire to scribble takes possession of one; hence the following random notes, which I trust may be found useful:—

Cod-Liver Oil "Emulsion."—A receipt, doubtless not new, for cod-liver oil "emulsion." Take honey, 1 lb., cod-liver oil, 1 lb., and the juice of one lemon; mix, and shake well. Dose, one and a-half times the quantity of oil usually taken alone.

Perforated Zinc over Entrances.—Referring to the mention of this for "W.B.C." hives in B.J. of December last, on pages 503 and 516, I may say, having used this device for some time, I should like to point out that it is much better if the zinc is not fastened in any way to the hive, but simply *laid on* over or above the entrance. It will be found, however, that the body-box will slide over the edges of zinc. To obviate this turn up the edges about ½ in.; this will form a shallow tray and so prevent its doing so. There is also another advantage than that justly claimed by Mr. Norman, viz., it will be found that when the bees are flying they will nearly always walk out of the hive over the bridge thus provided, and this, in the busy days of surplus-gathering, leaves the alighting boards and entrances freer for the incoming bees. The bees will sometimes propolise the zinc, but not often, especially if the holes are fairly large.

Transferring from Skeps to Frame Hives.—I have found a reliable method to do this is, when the skep is strong in bees, to drive it in the usual manner until the queen is seen to run up. The driving may now be stopped. Go to another frame hive and take out a frame containing brood, &c.; insert this in the frame-hive proposed to be stocked, and fill up with frames of foundation, or, better, drawn-out combs; place a sheet of excluder zinc over frames, then put skep on same; cover zinc all round skep with quilts except at one corner, where a feeding-stage should be put; fill the bottle of same, and put the cover over all. Now throw the driven bees down at entrance, when they will, of course, run in. At the end of three weeks remove skep, or leave same on to form a super if required. The advantage of this plan is that by putting in the brood, enough bees stay below to feed the queen, and it will be found that if the feeder is kept going they will very quickly take full possession.

To Ensure Candy "Candying."—If a piece of candy, made at a former boiling, is broken up and put with the sugar, it will be found to candy much more readily when it is boiled. I do not know why, but have always found it so.—WILL HAMPTON, *Richmond, January* 20.

MY YEAR'S BEE-KEEPING.

TAKING BEES TO THE MOORS.

[4656.] One day while at his usual work, some twelve or thirteen years ago, my father chanced to secure a stray swarm of bees, and, as luck would have it, managed to catch another stray swarm the next day. It was real swarming weather at the time, and runaway swarms were unusually numerous. But this was the beginning of our bee-keeping, which was, of course, on the straw skep system.

For the first year or two a local bee-keeper in the district used to drive the bees at the end of each season at honey-taking time, but afterwards a brother and myself learned to do the driving ourselves.

Three years ago I changed my place of employment, and the first day I entered on my new duties one of the workmen inquired if I knew anything about bees. I told him that we had seventeen skeps and one frame-hive at my home, and that I was in the habit of driving the skeps at the end of each season. He became interested, and we had a regular bee-chat. And this chat was the *rising of the sun* as far as my active and real interest in bee-keeping was concerned.

Working, as I do, in Aberdeen, eleven or twelve miles distant from home, I managed to go there every week during the past year, from March till November, and I am well pleased with the results. I started the season with twelve stocks, one of which I used for queen-rearing. Four of the hives sent out swarms, one of which I sold. I thus went into winter quarters with fifteen colonies of bees. From the whole I got 560 lb. of clover honey, and later on I took eleven hives to the "Hill of Fare," about nine miles away, and secured 400 lb. of heather honey from them, making a total of 960 lb. I also had 29 lb. of beeswax, for which I got 1s. 6d. per lb.

I disposed of nearly the whole of the clover honey in one lot. The price here in Aberdeen was low in 1901, viz., 6½d. and 7d., and there was some difficulty in getting that.

I do not know if the "Rymer" heather-press is a good one or not, but the "Garstang" is, to my mind, a slow-working machine.

I would like to ask the opinion of your readers who have had experience of taking bees to the moors, with regard to the best and

most speedy way of closing up the hives and securing the bees when taking them to the moors, as this operation last year caused me the "warmest reception" from the bees of the whole year.—WILLIAM REID, *Greystone, Skene, Dunecht, Aberdeenshire, N.B.*

BEGINNING BEE-KEEPING.

A GOOD AND A BAD START.

[4657.] About the month of July, 1900, one of my neighbours (a small farmer) secured a fine stray swarm of bees which clustered on his premises, and as no claimant appeared for the bees, the swarm was duly hived in a straw skep. Being a little elated over his "find," the farmer purchased a new frame-hive, costing 16s., and I was asked to put the bees therein, which I did, after fixing starters of comb-foundation in the frames. Two days later, another stray swarm made its appearance, and still no owner; this time, however, the bees were allowed to remain in the straw skep. All went well till the close of the year, when both stocks were examined, and I found the frame-hive could spare one frame of good comb-honey, while the skep allowed for the removal of a small side-slab of comb as a tempting reward of the year's produce. This done, both skep and frame-hive were packed up for the winter.

Upon examining the hives in the spring of last year, I found the skep in good condition and healthy, but the frame-hive was so badly affected with foul-brood that I advised complete destruction of the contents, and, with the assistance of the farmer, the said "contents" were burnt and buried. The hive was well scrubbed out on the next washing day with hot water and soda, then dried; I afterwards painted it inside with benzoline, and I set it alight to scorch the wood. After being left for a fortnight, it was again painted over with carbolic solution (one to two). This skep sent out a swarm at the end of May last, and the swarm was put into the disinfected hive with new frames and starters; a little syrup was also given to the bees in June when the weather was unfavourable. This swarm yielded two racks of good sections, and the bees are now packed up for the winter on ten frames with sufficient store.

The results in the above two cases are so entirely different that it makes one wonder, Why did the one lot become diseased and the other continue healthy?—J. B., *Polyphant, Launceston.*

DISTRICT B.K. ASSOCIATIONS.

[4658.] It is very gratifying to hear that bee-keepers in Bourneville are anxious to form a district association (4651, page 26). Bourneville is, I fancy, in Worcestershire. The association of this county has recently adopted a system of local secretaries to look after the interests of each district, and this practically gives to every part an association of its own, with no limit to any special combination and activity that may be desired locally. This offers all the advantages of a district association, together with those of a county B.K.A. Does Mr. Tilley wish for more than this? I shall be happy to answer any inquiries from him or his neighbours.—JOHN P. PHILLIPS (Acting Secretary, Worcestershire B. K. A.), *Spetchley, Worcester, January* 20.

[4659.] Your correspondent, "Frank Tilley" (4651, page 26), in last week's issue, in writing of District Beekeepers' Associations, most certainly strikes the right note, and if it could be put into practice (and there are no great difficulties) would be beneficial to the craft generally, and to the objects of the B.B.K.A. itself, viz, the encouragement, improvement, and the advancement of bee-culture, particularly among cottagers and the working classes. As he very justly states, it is of very little interest or advantage to belong to an association whose centre of working is probably twenty or more miles away; and many are in a similar position to mine, that is, unable to spare the time and cost of attending meetings at that distance. This being so, I would ask, why not encourage the formation of village or town associations with a five or six mile radius limit (or more if the district needed it), and which would, of course, affiliate with the county B.K.A. for the annual subscription? By so doing, it would keep in touch with and under the ruling of the parent association, the local members sending delegates to each county meeting.

The advantages enjoyed by members of the local branch would be numerous, and, if properly managed, the latter could be carried on for a small annual subscription, in order to include the poorer enthusiast. The secretary would have little difficulty in inducing a few of the local gentry to become patrons, honorary members, &c., which would assist considerably in keeping the branch in a good financial state. It is safe to say there are plenty of people in every suitable locality who would gladly take up bee culture if they could have the assistance of an expert in the way of advice, and a practical illustration of the methods of handling the bees.

The association could have for its objects the following, amongst others:—(1) Distribution of bee literature; (2) *free* instruction to new members; (3) arranging (where possible) for a bee tent and expert at the local flower or agricultural show; (4) purchase of the more costly appliances for the use of members; (5) the services of certified experts for the guidance of members; (6) arranging for free lectures on bees, and the advantages of keeping, &c.; (7) periodical meetings to transact the business of the branch, and to discuss the merits and demerits of the different methods and appliances, and to

"enthuse" generally on the best means of extending the interesting hobby of bee-keeping.

I am afraid that in this locality, on the borders of the Black Country (where bee-keepers are few and far between), the time is hardly ripe for such a step, but in lots of places these local associations could be of the greatest service.—"B. MAD," *Walsall, January* 20.

[The difficulty which presents itself to those located in districts where few persons keep bees is, to our mind, the trouble of maintaining the enthusiasm necessary to keep a local bee-club on the move. For this reason, affiliation with the nearest County B.K.A. seems preferable.—EDS.]

CAN BEES HEAR?

[4660.] In reply to the questions asked by Mr. Geo. Richardson (4653, page 26), I have to say:—1. I am unable to give a satisfactory answer to this query, as I have never pinched a bee to see what effect its cries would have on the others. 2. As I have only had three swarms since starting bee-keeping six years ago, and never a "cast," and have heard the "piping" but once, I am hardly qualified to answer the second question. But it surely does not follow that, because the queen utters the cry termed "piping," the bees should hear and know the meaning of her cries? Does it not rather show that she utters the shrill, piping sound as an angry cry, as she desperately attempts to destroy her rivals in the cells, which she is prevented from doing by the bees? 3. With regard to the swarm thrown upon the floor board, I am inclined to think that the sudden precipitating of the bees from the skep may cause the queen to cry out in alarm, but never having heard the queen make a sound as stated when running in with the swarm, I for one can offer no opinion or say why she does it.—ARTHUR H. HOMERSHAM, *Sturry, near Canterbury, January* 20.

[4661.] Having noticed the controversy on the above subject in the B.B.J. from time to time, I am on the present occasion expressing my experience, having been a bee-keeper for something like twenty years.

My opinion is that bees are undoubtedly gifted with the sense of hearing. I formed this opinion soon after purchasing my first skep. I remember standing near it one evening when there were distant peals of thunder, and each time the thunder was heard the bees set up their buzz precisely in the same way they do when the hive is smartly rapped. I have tested them in the same way many times since then. Bees appear to have a great dread of thunder, and at the first sound of it hurry home from the fields in no uncertain manner.

Many of your readers will no doubt have noticed that immediately after a thunderstorm has passed away, the bees (as a token of rejoicing, I presume) leave their hives and circle over their homes, at the same time sending forth a merry hum, the like of which is, perhaps, not heard at any other time.—JOHN HUBY, *Welbeck, Worksop, January* 17.

"SOOT"-GATHERING BY BEES.

[4662.] Referring to Mr. Woodley's remarks last week under this heading in his "Notes by the Way" (page 21), about bees flying round the tops of chimney-pots, I have on a few occasions seen them "go" for my wash-house chimney (a cast-iron pipe about 7 ft. long), but only on washing days, and when very hot. One day in July, 1900, when I came home to dinner, the bees were attacking the chimney-pipe, not three or four at a time, but without exaggeration I may say twenty or thirty. They appeared to be very angry, the smoke emitted from the pipe seeming to irritate them, for they whirled round the smoke and then darted at the pipe and tried to sting it. Being unable to make any impression on the pipe, the bees vented their rage on my wife as she was pegging out the clothes, and my two youngsters, playing in the garden, all three getting stung, and having to stay indoors until the bees were in a better temper. They quieted down, however, as soon as the "copper" fire went out, so that I concluded it was the smoke that the bees took exception to, as they were constantly passing by the chimney, at work on a field of sainfoin close by.—ARTHUR H. HOMERSHAM, *Sturry, near Canterbury, January* 20.

[4663.] Referring to Mr. W. Woodley's mention of bees "Soot-gathering," on page 21, I may say that during my experience as a bee-keeper I have never known bees gather soot; nor do I for one moment believe that they do—at least, not with the intention of carrying it into the hives. What I have known is this. Near swarming time I have on many occasions seen bees spying about chimneys for a suitable place to take possession of when the time arrives for the swarm to leave the parent hive. In this manner they often get smeared with soot, because when once they take a fancy to any particular place they are very persevering. I remember some few years ago watching some bees (perhaps half-a-dozen to begin with) who found an opening in a wall near a chimney. They carried out small pieces of mortar and everything they could to enlarge the space. Each day their number increased till at least 200 were busily employed. About ten days after I first noticed them a swarm came and took possession of the place. There can be no doubt, in my opinion, that the queen was guided there by the bees who had been so busily engaged making preparations during the previous ten days. I have seen the above done on three or four different occasions.—JOHN HUBY, *Welbeck, Worksop, January* 17.

FOUL BROOD AND LEGISLATION.

[4664.] I believe a good deal has been done by the different bee-keepers' associations in the endeavour to bring the matter of foul brood before the Government, but apparently without success. There are a great many bee-keepers who are not members of an association (I am a non-member myself), and I would ask, Could not every would-be bee-keeper throughout the country combine, and, backed up by the associations, petition Parliament to introduce a law compelling the destruction of all foul brood? On the other hand, if we cannot combine, how would it do for every district to collect together its different bee-keepers and petition their Member of Parliament for the district?

With the destruction of foul brood, bee-keeping would go ahead in this country, but as it at present stands I do not see how it can be otherwise than stagnant, and never advance, as it should do in these progressive days. It is very hard on the bee-keepers who wish to make apiculture a business to be continually confronted with this terrible bee-scourge in spite of all precautions taken to prevent it, and, moreover, caught generally through the carelessness of some neighbour.

It really seems almost laughable to be well up in the subject of honey-production, and yet not be able to put one's knowledge to practical use, for that is what it amounts to.

In America, where they are more practical, they appear to have stringent laws about foul brood (*vide* "Dadant," page 456), and it should be so in this country if we could only wake up, and what a boon to agriculturists would bee-keeping without foul brood be in these depressed days!—F. W. Moore, *Upton House, Sompting, January* 20.

[We have no desire to shut out from our columns the free expression of opinion on the question of foul brood legislation like the above; but our correspondent is obviously a beginner in bee-keeping, or he would have known that a few years ago the most strenuous efforts were made, involving heavy expense, to secure compulsory powers for dealing with bee-pest or foul brood. A large and influential deputation of bee-keepers, supported by a goodly number of M.P.s, were received by the President of the Board of Agriculture, Mr. Herbert Gardner, the deputation being introduced by Sir John Gorst, now Minister of Education, and every effort was made to have a short Act of Parliament passed through the House with the above object in view. It was, however, all to no purpose, because of the number of more important measures demanding all the time of the House. It is, therefore, futile to talk of petitions to Parliament for securing the desired end. If Members of Parliament can be got to take an interest in the subject, it would at least educate them into a better understanding of the heavy grievance bee-keepers labour under in having the industry damaged as it is, but this is all we can hope for at present.—Eds.]

PROMOTING HONEY SHOWS.

[4665.] Thanks mainly to your kindness in inserting notice of our show, with its prizes for honey, under "Shows to Come," we had a most successful honey exhibit last year in connection with our Ammanford Horticultural Society. Many experts said that it was the finest show of honey that has ever taken place in Wales. We had over 130 entries. We are going to repeat the prizes at our show on August 16, 1902, but hope to avoid some of the mistakes we made last year.

Although we did our best in the matter of appointing judges, there was some dissatisfaction among the exhibitors, and, in consequence, it is intended to ask you to nominate the judge for the show of 1902.

We intend this year to have the judging done on the day before the exhibition, so as to give the judge plenty of time.

Please let me know whether you will kindly agree to select the judge for us!—Ivor Morris, Hon. Secretary, *Ammanford, January* 16.

[We are very pleased to have been useful in contributing to the success reported above, and will be glad to assist again, but we cannot take upon ourselves the task of selecting, or even nominating, judges. You should apply to the B.B.K.A. for assistance in this direction.—Eds.]

LARGE FRAMES.

[4666] Like your correspondent, "C. M.," Stanford-le-Hope (page 30), I am thinking of trying a larger-sized frame than the "Standard," knowing fully that by doing so I isolate myself, but as a mere amateur this is a matter of little moment. The importance of all using a uniform frame cannot be questioned; at the same time the fact of a fixed standard being universally adopted in no way proves that it is the best. Few who remember the old broad gauge of the Great Western Railway will deny that they saw it go with regret, or that they considered it better than the present one now used all over the country. What I think "C. M." asked for, and what I should certainly like to hear, is an impartial opinion as to the actual merits or otherwise of a larger frame than the present one in use, apart altogether from the expediency of adopting it.

You, Sir, in your reply say "that any advocacy of either a larger or a smaller frame than that now in general use must come from other quarters or other journals than the B.B.J., but this, I hope, does not mean that you bar discussion on the subject, or that you will refuse to let me appeal to any of your readers who have had actual experience of these larger frames to give their opinion of them in your paper. I make this request as a seeker after truth, let it take me where it may. —E. Walpole-Simmons, *Sidbury, Worcester.*

APIS DORSATA, FABR.,

CONSIDERED IN THE LIGHT OF DOMESTICATION.

By R. Hamlyn-Harris, F.R.M.S., F.Z.S., F.E.S.

It is now some years since the idea was first conceived that by the introduction of *Apis dorsata* (known as the Giant Bee of India) a valuable addition to our fauna would be obtained, yielding a larger quantity of honey and wax, and generally more profitable than our honey bee. *Apis mellifica* and its different varieties—var. *ligustica*, var. *arimolia*, &c. According to Dalla Torre :—"*Apis dorsata*, Fabr., occurs in Assam, India, and Java (♀ ♂ ☿). Var. *bicolor*, Klug, occurs in Assam, India, Ceylon, and Java. Var. *testacea*, Smith, occurs in Assam and Borneo (♀ ☿). Var. *zonata* occurs in Assam, Celebes (♀) and Philippines." The var. *zonata* also occurs in India, which is not mentioned by Dalla Torre.

About three years ago a special inquiry was set on foot to ascertain whether or not the Giant Bee of India was really a suitable subject for domestication. At that time I was permitted to look over various reports at the India Office, and all these agreed that *Apis dorsata*, mentioned generally under native names, could not be domesticated on account of its intractable character. The chief points noted are :—1. It is said to be exceedingly vicious, often attacking man or beast on the smallest provocation. 2. It preserves the same habits and appearance wherever its habitat. 3. It has never been known to build its nest under shelter, but mostly on isolated lofty trees or overhanging rocks. 4. After the honey season they will desert their nests, and often travel for long periods and great distances, even crossing such mountain chains as the Nilgherris in their course. 5. They build single combs. 6. And are used to approach from north, south, east, or west. 7. They rarely remain in one locality for more than three weeks. 8. Emigrating as flowers become scarcer.

We will consider these points more in detail to make the subject better understood. Among the hillmen, near Darjeeling (Eastern Himalayas), this bee is known by the name Cargoo, and is generally an object of fear and dislike—according to Sladen. It will be readily seen that the risk of introducing such a bee, even were it possible, into a thickly populated country would be too great. Not only the hillmen of Darjeeling find *Apis dorsata* an undesirable neighbour, but all are agreed on the subject who have had any experience in the matter. Interesting, however, is the way in which the natives of the Malay Archipelago, for instance, take the combs and honey, showing much courage on their part. Perhaps, also, the *Apis dorsata* may be somewhat less dreaded in the islands than on the mainland of India. The native, having located the nest (built some 70 to 80 ft. from the ground, sometimes even more*), repairs by night to the spot, and after a wearisome climb, sometimes lasting an hour, with only the smoke fumes of a torch, he drives the bees away from the combs, which are then severed from the boughs and let down by cords to his helpers below. Such a rough-and-ready style of proceeding must necessarily aggravate the bees, and stings, as one may suppose, are plentiful; still the tribesmen do not seem much concerned. It is well known that one of the greatest obstacles to the domestication of this bee is its natural wildness and its inability to settle permanently in one spot. When we consider that *Apis dorsata* usually makes its nest in wild and rocky country, only remaining in one locality so long as flowers abound, we shall better realise why it moves from place to place, and the importance of so doing to its general welfare. Therefore we see that only in completely altering its natural habits could we hope to domesticate this bee, or bring it into use under other circumstances to those in which it has always lived. Also on account of its size and the power of its flight the Giant Bee will travel as much as 100 miles before again settling down to home life.† It is not so much the honey gathered by these bees which is valuable to the natives, but the large quantities of comb they produce, which is melted down into wax, which forms a valuable article of industry in India. The hillmen do not trouble much about the honey, but are said to eat the young bees and larvæ with great gusto. Another hindrance to domestication is the way they build their nests, quite in the open, entirely unprotected, and always single combs from about 5 ft. to 6 ft. in length, and about 2 ft. to 3 ft. in depth. Some fine specimens of these combs are to be seen in the South Kensington Natural History Museum. When a species of insect has been used to certain habits for generation after generation—in fact, has never known any others—it will be readily understood how difficult would be the problem presented to us did we attempt to keep such a refractory creature in confinement. The only attempt made seems to have been a failure. A queen bee was tied by a thread to a stick and placed in the hollow of a tree, and after two or three months a very small piece of comb was found, and the experiment, proving useless, was abandoned. Since this a writer to the last Government reports says that "he had seven hives all well and fed for the winter," but in the spring the "little brutes" decamped by twenty and thirty a day, until each queen in turn left the hive in disgust. Clipping the queen's wings, as done in modern bee-keeping, would prove fatal to *Apis dorsata*. On account of her uncontrol-

* This is a protection against the bears, which are (as is known) fond of honey, and would climb the trees in search of it.

† *Apis dorsata* is, however, inclined to fly somewhat clumsily, and to visit flowers somewhat listlessly.

lable character she would probably be lost. The question arises, if we cannot domesticate *Apis dorsata* itself, could we by judicious crossing attain the desired end? The best answer to this question will, I think, be found in the fact that European bees exist which are closely allied to a species found in Northern India, which never crossed with *Apis dorsata*. All these facts considered, there only remains *Apis Indica*, very similar to our European bee, with which domestication might be a success, but if any real advantage would arise therefrom or not is doubtful, and no doubt can remain that the facts relating to *Apis dorsata* must for ever bar the way to its domestication. —*The Entomologist's Record and Journal of Variation* (vol. xiv., No. 1, 1902).

Echoes from the Hives.

Thirsk, Yorks, January 18.—The weather in this district, with the exception of about a fortnight last month, has been very mild so far this winter, which has allowed the bees the privilege of a flight when the conditions have been favourable. Last Thursday they had a grand day, and with the sun shining in its best style, and the birds making love in the trees near by, one was almost inclined to feel that spring had actually arrived. It was nice to think so, but to those of us who have seen so many of what my little girl pleases to call "berf" days, we are not by any means clear of the rocks, and the breakers ahead may be much nearer than we expect or care for. My thirty-seven stocks entered on their winter vocation with plenty of natural stores, and strengthened, where necessary, with driven bees headed by young queens, and I am therefore perfectly happy to sit still and leave the bees severely alone beyond an occasional quiet poke at the entrance with a hooked wire to remove any dead bees that may be impeding the traffic. The only hive that gives me any anxiety is a nucleus stock on four frames, which, for extra warmth, I have placed inside the shell of a "W.B.C." hive with free egress, packing the nucleus all round with plenty of felt carpeting, and cushions on the top. It is in the nature of an experiment, and up to now all is well. If I am successful I shall have a young queen to give to any stock that may be found queenless in the spring, or to replace one whose presence is no longer desirable.—R. T. TENNANT.

Liberton, N.B., January 20.—After some very wintry weather lately, hard frost and snow, we are again having it mild, and the bees show a restlessness to be about. The 16th was quite a spring-like day, and for an hour or two the bees were in full flight, their merry hum putting one in mind of a summer day. So far they have come through the winter very satisfactorily, and have still an abundance of stores. Should open weather continue, strong colonies, even thus far north, will soon begin brood-rearing.

Wishing our JOURNAL, which has just entered its "thirties," continued success, may it equal, if not excel, all it has already come through, and may our editors and all our bee-keeping friends have a prosperous and happy year.—W. R. LUCA.

Queries and Replies.

[2784.] *Improving Colour of Beeswax.*—Relative to improving colour of beeswax, would you kindly inform me what "raw acid" is? Is it procurable at a chemist's, or where? I melt my wax with an extractor or steamer procured from Steele. Is the acid, therefore, to be added to the boiling water in the lower chamber, and does the steam affect the wax enough to colour it? I have a lot of wax which I sold for 1s. 6d. per lb., but it got dulled and injured in colour waiting for ½-lb. moulds, which I thought I could have procured in Dublin. However, after waiting nearly three months, the firm I applied to failed me, and my wax is affected by damp. I would also be very much obliged to you or any reader of B.B.J. who could advise me where I could procure ½-lb. moulds. My order is from a grocer to supply beeswax made up in neat ½ lbs.—(Miss) M. BEAMISH, *Muckross, Clonakilty, co. Cork, Ireland.*

REPLY.—With regard to the question of improving the colour of beeswax, we read in the "A B C of Bee Culture" as follows:—"The difference in colour is largely due to the amount of impurities the wax contains. To refine this wax, or to reduce it to a lemon colour, melt it in a vat of hot water, slightly acidulated with sulphuric acid, in the proportion of anywhere from 1 part acid to from 50 to 200 by weight of water, depending on the amount of impurity in the wax. In all the years we have been in the business we have found no practical or satisfactory way of bringing the wax to a yellow colour—that is, to its original state of purity—except by treating it with sulphuric acid."

[2785.] *Improving Colour of Beeswax.*—Would you kindly oblige me by naming the acid used for "improving colour of beeswax," as mentioned in reply to Query 2779 (page 28) in this week's B.B.J.? I have a lot of wax very dark. Should like to brighten it up a bit.—F. R. COURT, *Sittingbourne, January* 17.

REPLY.—The reply to Miss Beamish answers your query fully, but we may add that where a simpler method of effecting the desired end is preferred, that of Mr. G. M. Doolittle may be adopted, viz, a pint of strong vinegar in one quart of water for every 10 lb. of wax.

[2786.] *Size of Hives for a Beginner.*—I am going to start bee-keeping this year, and am puzzled as to the size of hive to use. I have heard an expert recommend one taking fifteen frames, but find that ten-frame hives are generally used, and makers adopt this size as a rule. But if a fifteen-frame one is better, why use a ten-frame one? From the figures given in the "Guide Book" I have calculated that ten frames are insufficient to take full advantage of the full laying powers of a prolific queen without reckoning for stores. 1. I should be very much obliged for your advice on this point. 2. I should also like to know if bees store pollen in supers.—"EARNEST," *Sutton Coldfield, January* 17.

REPLY.—1. Our advice is, Be guided not by the opinion of the "expert" referred to when it is contrary to the general opinion of practical bee-keepers of long and extensive experience. If we knew the name of the "expert" mentioned, it might enable us to gauge the value of his opinion better than a mere beginner can. When "makers" adopt a hive holding a certain number of frames you may safely assume they are right, notwithstanding the opposite view you quote. 2. Yes, at times, but they rarely do so when skilfully managed.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

ARTHUR P. SHEPHEARD (East Sheen).—*Bee-Candy.*—There is no one we know of who makes "sugar-candy for bees from Barbadoes sugar," unless the latter is refined to prepare it for bee-food. Bee-candy should be made, preferably, from pure cane lump sugar, and when made it should be quite soft and smooth in grain. In this issue of B.B.J. we notice several advertisements of soft bee-candy, with prices per lb. Please refer to these for reply to your inquiry.

R. S. (Leatherhead).—*Medicating Bee-Candy.*—It is impossible for us to judge whether or not the sample of candy sent is "too strongly medicated or not." The maker of the candy alone knows the proportion of naphthol beta solution added to the mixture, and if the printed directions on the packet were adhered to it will be right. On the other hand, you must pardon us for saying your candy-making is a complete failure, the sample sent being entirely unsuitable for bee-food. It is hard and coarse-grained, instead of soft and buttery. In fact, the greater portion of it will be cast out by the bees as hard, dry granules, through their inability to liquefy it. Read the directions in "Guide Book" on candy-making, and the result will be similar to the small sample we send you by post to show what good bee-candy should be like.

JAS. THOMSON (Hants).—*American Bee Journals.*—We do not stock any bee journals published in America, but if the amount of a full year's subscription to either *Gleanings* or the *American Bee Journal* be sent to us we will supply them to order for posting direct the from U.S.A. to any address given. The subscription for either of the above is 6s. 6d. per annum. payable in advance.

"A GRUMBLER" (Northants).—*Anonymous Communications.*—We cannot be justly charged with either want of attention or lack of courtesy in taking no notice of anonymous communications, or those signed with *nom de plume* only. The printed notice at head of our Correspondence Column clearly defines our position in respect to your complaint, and it should be understood as such.

H. L. K. KEMPTON (Birmingham).—*Wet Quilts on Hives.*—If the upper quilts are dry the wet cannot well arise from rain coming through a leaky roof. We imagine the bees are not strong in numbers, and, in consequence, the cluster occupies only the lower portion of combs, in which case the warmth arising from the bees would condense overhead and cause dampness. Dry the wet quilts and see if the trouble is repeated.

P. C. J. (Sutton).—*Lantern Slides on Bee-Keeping.*—The slides referred to may be hired from the B.B.K.A. on application to the Secretary, Mr. Edwin H. Young, 12, Hanover-square, London.

*** A correspondent writing from Ambergate says:—"Will you please say if the following two books are valuable, as I think they are, but am not an authority?: No. 1. 'An Enquiry into the Nature, Order, and Government of Bees, with a New, Easy, and Effectual Method, &c. Written upon observation and experience by the Rev. Jno. Thorley, of Oxon. Fourth edition; 8vo; sewn; plates.' Date, 1774. Illustrated. No. 2. 'The Practical Bee-Master, in which will be shown how to manage bees either in straw hives or in boxes, &c. By John Keys, bee-master.' 8vo. Illustrated. Date, 1780." We shall be glad if any reader well up in prices of old bee-books would send a line as to value of the above. For ourselves, we may say the books mentioned, though possessing more or less value to the collector, are not specially rare. We have more than once known Thorley's and Keys' books to be bought for a half-crown each or less at a London bookstall.

Editorial, Notices, &c.

INSURANCE FOR BEE-KEEPERS.

Reverting to our mention of the proposed scheme of insuring bee-keepers against loss from damage done by their bees on page 11, and the subsequent discussion on the subject at the meeting of the B.B.K.A. Council reported last week, we believe that a sufficient amount of support has now been promised to warrant the Council in drafting the full details and formulating the "rules and regulations" for working the scheme. So far, then, all is satisfactory, but it is not a little curious to note that the great majority of applications received since the supplement to our issue of December 26 was published have come from readers of the B B J. who are not members of any bee-keepers' association at all. If, then, the response from members of a county B.K.A. is at all commensurate with those from bee-keepers who are not, the result will exceed the most sanguine anticipations. We therefore hope that the executives of such associations as have taken the matter in hand will not allow their energy to slacken until it is definitely known how and in what way the effort will end.

TOTAL HONEY IMPORTS

FOR THE YEAR 1901.

January	... value	...	£1,060
February	... ,,	...	1,327
March	... ,,	...	4,547
April	... ,,	...	3,434
May	... ,,	...	7,265
June	... ,,	...	2,404
July	... ,,	...	14,237
August	... ,,	...	1,965
September	... ,,	...	1,539
October	... ,,	...	2,004
November	... ,,	...	2,076
December	... ,,	...	1,039
Total value	...	...	£42,837

WORCESTERSHIRE B.K.A.

The annual general meeting was held on January 25 at the Guildhall, Worcester, the Mayor of Worcester, Walter Holland, Esq., in the chair. There was a fair attendance of members.

The report of the committee stated that the progress of the Association had been good; there was an increase of thirty-one members, and the balance-sheet of accounts showed a small sum in hand. The season had been an unusually good one as regards the take of honey, and there had been a remarkable decrease in foul brood throughout the county. The newly-adopted system of local secretaries and local experts was a decided success, and there are now nine certificated experts employed.

Lord Coventry was re-elected president, and the vice-presidents were re-elected with the addition of Dr. Corbett and Mr. A. H. Martin. Mr. Howard Dickinson was elected treasurer, Mr. J. P. Phillips hon. secretary, and Mr. A. R. Moreton, assistant secretary for the Show. On the proposal of the Rev. J. B. Wilson, the secretary was instructed to inform Colonel Watson of the great satisfaction felt by the Association at the continued progress of Lieutenant Watson, the late hon. secretary, towards complete recovery from his serious illness in South Africa.

The insurance scheme of the B.B.K.A. was discussed and referred to the committee. Eighteen members, with a maximum of 144 hives, handed in forms of request to be included in the scheme.

It was reported that an attempt to establish an agency for the disposal of members' honey was being made, and much satisfaction was expressed by those present. — JOHN P. PHILLIPS, Hon. Sec., *January* 27.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "*THE EDITORS *of the 'British Bee Journal,' 17, King William-street, Strand, London, W.C." All business communications relating to advertisements, &c., must be addressed to "*THE MANAGER, *'British Bee Journal' Office, 17, King William-street, Strand, London, W.C."*

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4667. The month of January now closing has been abnormally dry, and so mild, that birds have started nest building. Early flowers are bursting into blossom. I hear of violets and primroses being gathered outside. On the 25th I saw an azalea tree in full bloom. The last two nights, however, have been frosty, and as I write we are having a slight fall of snow. Many opportunities of flight have been afforded to the bees, and on the 24th they were busy at the watering place, probably needing water to liquefy the cake of candy, but I have no doubt that breeding has started in strong colonies.

Foul Brood and Legislation.—Your correspondent, Mr Moore (4664, page 37), would, no doubt, hope to stamp out the pest promptly if we could wield the strong arm of the law, but I gather from American bee journals that though they have obtained that power, yet

even across the Atlantic the foul brood inspectors year after year report the work done, yet not one of them has found "his occupation gone." They are still fighting the insidious foe, much as our sanitary inspectors here are grappling with contagious diseases of all kinds. This in no way reflects on the good work done by inspectors, but even if empowered by Act of Parliament to deal with foul brood, it would be probably many years before it was stamped out. If compensation was given by the State for stocks of bees destroyed "by order," many bee-keepers would, no doubt, be willing to receive the inspectors, but if I were asked the value of a foul-broody stock I should say no value at all to the owner, but possibly of considerable value to neighbouring bee-keepers, if total destruction of the infected stock will safeguard the healthy bees in the locality. In less troublous times, no doubt, our Parliament will find time to meet the wishes of bee-keepers. I observe Mr. Moore refers to bee-keeping as being "stagnant." Surely our friend should himself "wake up," when in the very number of B.J. in which he writes there appears the advertisements of fourteen firms of hive-makers; and if he could only tot up the aggregate number of hives turned out every year by the said fourteen firms he would, I fancy, be rather surprised. Why, in the past decade the number of hives made must be legion. I think we may safely say that, though apiculture does not move by leaps and bounds, yet it is making substantial progress. The pages of the B.B.J. from time to time give examples, and point the way, if not to cure, at any rate, keep the disease under control so that it loses its terrors—and I expect the work of F.B. inspectors in America and Canada do no more. We are told that Mr. McEvoy, the inspector for Ontario, has cured hundreds of colonies by the well-known and old method of shaking the bees from their foul-broody combs, and giving them starters only in another hive. He certainly supplies them with a second set of "starters" a day after, but he takes no trouble to disinfect the hives, and here we disagree with him.

Management of Out Apiaries.—A friend writes asking me for information anent managing out-apiaries profitably. This subject has already been discussed in the B.B.J., but perhaps our friends R. Brown or Allen Sharp will be able to give useful information on the point. For myself, I would say much depends on locality and more on ability in the bee-keeper. Location, too, will require consideration. If too near dwellings, or close to the high road or a farmyard, it may prove a constance source of anxiety all round On the other hand, in sparsely-populated districts a tumble-down cottage with garden may be rented cheaply, and gives at once an ideal place for bees; but they will require "self-hivers" in hot weather, or some one near to watch for and hive swarms. Some means of communication with the out-apiary will also be needed now, and as time is money the out-apiary must not be four or five miles away. When my friend asks: Does it pay? I can only say of my home-apiary, as also my out-apiary, the good wife and I *make them pay* if we get fairly good seasons. But I have another string to my bow besides bee-keeping, and I can keep the wolf from the door by my usual trade, so that the moderate profits of bee-keeping, taking a series of years, are reserved as "Old Age Pensions" for the *mater* and myself.—W. WOODLEY, *Beedon, Newbury.*

QUEEN-BREEDING BY SELECTION.

[4668.] There is nothing new in the selection of special mothers for the breeding of future queens, all bee-keepers of repute and intelligence having given their attention to this matter for years past. From letters received by myself during the past twelve months, I have been more than ever impressed with one point which has become a certainty in my mind, viz., that we can do a great deal more by selecting our breeding queens than most bee-keepers imagine. Whatever system is adopted in cultivating or working our bees, we must possess the right kind of queen at the head of every colony relied on for yielding a good return, or all our plans will prove failures. Once we become, in a sense, master of the bees, why should we not be able to direct them as we think fit? It is not difficult for us to repair some of their failures when such occur; we may, for instance, unite weak lots, equalise stores, restrict the birth of the queens, dethrone faulty ones, and substitute another, after forcing the reluctant consent of the bees to receive an alien mother. We can also restrict the number of drones, appropriate the fruits of their labour, and I might say (with the aid of super-clearer) without their knowledge of what we are doing. We receive a fair amount of obedience in all those operations. Viewing, then, all these advantages, I ask, Why should we not go a step further? Suppose we wish to curtail or to prevent swarming, why should we not select our breeding queens from colonies that show the least disposition to swarm? I believe we should be as successful in our efforts in this direction as in any other, if we do but go rightly to work. It is quite certain that over-swarming is fatal to success in honey-gathering. The number of hives to provide (all of which must be fully furnished before any surplus can be secured) takes the gilt off the ginger-bread, and the year's profit is bound to work out on a very small scale. But some will say, "How about the man who is building up an apiary?" Well, he would either need to buy swarms or build up a few stocks from driven bees in the autumn of each year, whichever he found to be the most satisfactory in his practice.

I am writing for those who, like myself, do not require swarms, and are continually thinking out various plans for preventing the issue of such. Let us for a moment consider each stock in our apiaries separately, and what do we find? We can point, may be, to one hive that has been "boiling over with bees" all through the summer; we may have seen them hanging out at the entrance in a great cluster for days in succession, yet the bees have absolutely refused to swarm. They have, on the contrary, kept plodding on in the even tenor of their way, and given you a splendid return in section-honey. Another colony—treated possibly "next door" to the non-swarmer—has never appeared to be nearly so full of bees, and swarmed out at the first opportunity. I venture to say this sort of thing has happened repeatedly with every bee-keeper who keeps a fair number of hives and works in the direction mentioned. The only feasible explanation to be arrived at was that the first hive either lacked the inclination or it was never in a condition to swarm when the proper time arrived, but whatever the cause, I should prefer to use the non-swarming for breeding my future queens from. On the other hand, it is believed by some that the most prosperous hives are those that throw *one swarm only*. It is said that "the bees have fulfilled their mission and left behind them a succession of young queens," but even then it is a question whether or not they have left the best queens for our purpose. Personally, then, I strongly favour the view of breeding queens by selection, and I feel sure that swarming would in this way be greatly restricted, and by slow degrees this trait would establish itself in our native strain of bees, and in the near future, so that we might secure a non-swarming British bee in our midst. In this way swarming would be much reduced and the bees allowed to devote all their energy to honey-gathering and brood-rearing.

Reverting to the days of the straw skep, it may be asked, has not swarming been encouraged by the system adopted by our forefathers in "taking up"—or sulphuring—at the end of each season all their best and fullest hives, and leaving only those with just sufficient stores to carry them over winter? If we admit the reasonableness of this idea, there is no reason why this should be the case now; for with frame-hives, modern appliances, and up-to-date knowledge, we possess facilities which our forefathers could not even dream of, and so the situation is quite changed. Man is now master of the bees, not the bee-*keeper* only. It is well known swarming is hereditary, and far more pronounced in some species than others; therefore if we wish to reduce swarming we must eliminate this trait by breeding from a strain of bees which have almost no inclination to swarm under any circumstances. Nothing can be more annoying to the bee-man than to see stocks swarming just when not wanted, and thereby spoiling all his carefully-laid plans for securing a good harvest. And in order to avoid this irritation and loss we should select our breeding queens on the plan I have stated above, without losing sight of the other qualities required in a good queen.

I feel sure this method of selection, if carefully carried out, would do all I claim for it, and that it could be relied upon to a very great extent for securing the end in view. And in order to show that in the hands of our best bee-keepers this very thing has already been accomplished, I would refer to what Mr. Cowan says in the "Guide Book" on the selection of queens for breeding from. The chapter on "Queen Rearing" is exactly in accordance with what I have said as to the selection of mothers for future queens; and again on page 136 we read of a certain race of bees, "Their principal failing is a propensity for excessive swarming," and goes on to say the propensity "may be moderated or entirely prevented by giving them plenty of room and ventilation." This clearly shows a case of the need for selection. Again, no doubt many readers will remember Mr. Lancelot Quayle's "Glenmay Queen," whose progeny holds the record for weight of honey from a single hive in one season. We are also told that only one young queen was obtained from that colony in its "record" season, and that one was, I believe, purchased by Mr. S. Simmins for breeding from. Now, why was such an effort made to get hold of this young queen by a well-known queen-breeder? Simply because the latter had proved to himself that good qualities can be transmitted or handed down to the offspring, and certain it is this particular queen was not possessed of a prospensity for swarming, and this was taken into account by the purchaser. Just one more proof nearer home. Mr. W. Woodley, in B.B.J., Nov. 7 last (page 443), referring to the new tall section, says, "Although put on one of my strongest stocks, and on what I regard as my best sealing strain of bees, &c." Now it is certain Mr. Woodley has proved that certain colonies of bees can be relied upon to keep at work, and not given to swarming. A good "sealing strain" in the true sense of the word, must require careful selection so far as regards counteracting the tendency to swarm. There is more in this chance sentence of Mr. W.'s than some would imagine in first reading it over, and I for one should be glad if our friend would give a "Note by the Way" on selection to lessen swarming.—J. RYMER, *Levisham, Yorks., January* 23.

TAKING BEES TO THE MOORS.

[4669.] I should recommend your correspondent, Mr. Reid, who writes on page 34 in last week's issue, to close the hive entrances after the bees have finished flying for the day, and not, as he appears to have done before.

By adopting the former method there is no waste through any bees being left behind, and the risk of being stung is reduced to a minimum. The course I adopt is to go to the hives when everything is quiet in the evening, and, by placing the carbolic cloth in front of the doorways, prevent the escape of any of the occupants. I then draw out the entrance-slides, slip the perforated zinc behind the plinth in which the slides run (which has been prepared in the manufacture of the hive), and with two or three tacks everything is complete. In this way I can close up twenty hives in about fifteen minutes without any possibility of the bees getting out. I choose a moonlight night, if possible, for the journey, and by travelling at night, run no risk of any flying bees stinging the horses, should an accident occur; besides, there is not so much fear of suffocating the confined bees that there would be in travelling during the day.

On arriving at my destination I first put all the hives on their stands, then go to the first one located, place the carbolic cloth in front of the entrance, draw the tacks, take out the zinc, push in the slides, finally removing the cloth, and the work is done. I then light my pipe, and in travelling homewards occupy my mind in counting how many sections I shall get, where I shall send them, and how long I shall have to wait for the money, which items, by the way, are not always accurate!

As to the "Rymer" press to which your correspondent refers, I can testify that it does its work quickly and effectively, and in my opinion, will hold its own against any machine on the market.—R. T. TENNANT, *Thirsk, Yorks, January* 27.

SOME ESSEX NOTES.

[4670.] "*Standard*" *versus Larger Frames.*—It is now a good many years since a number of the most prominent and experienced bee-keepers of their time decided, after careful experiment and observation, upon the 14 in. by 8½ in. frame, now in general use, as the most suitable for a standard size in this country; yet the amount of evidence since accumulated in favour of a larger frame is very small. Of course, it is well known that any bee-keeper can use a frame of whatever size and shape that takes his fancy, but if this bee-keeper, at a future time, wants to sell his bees their value is very considerably reduced by reason of the frames being an odd size. Only about half our bee-keepers so work the standard frame as to get the comb really well filled with brood at the commencement of the honey-flow. My experience of frames larger than the standard is that proportionately more honey is stored in the body of the hive, and the same may be said of box and other hives with large combs. It is quite possible by good management (and we should all give this ungrudgingly) in anything like a good district for bee-keeping, to secure surplus honey from single hives, running in number of pounds into three figures. So while we are doing very well I think we should "let well alone."

The Drone Bee.—I was glad to see Colonel Walker's defence of the drone bees in the B.B.J. of January 16 (4645). During twenty years of practical bee-keeping, I have never seen the drone bee foul the hive. The male bee fills the place that it is brought into existence to fill, and is quite incapable of doing more than he does. It becomes more and more clear, as time goes on, that the male bee's name should not be "drone." Why not drop a name that is not only wrong, but wrongs that to which it is applied?

The Royal Show.—So the last "Royal," destined to travel afield to distant counties, is within sight. Referring to the prize list in B.J. for January 16. Everything has its advantages, but with the show-ground of the "Royal" fixed to one spot, we shall miss the opportunity of stirring up enthusiasm and making new beekeepers in a fresh field every year. This, in my opinion is a serious disadvantage, and I think other departments of the show will experience the same disadvantages.

Can Bees Hear?—Personally I have no doubt that bees can hear. That they do hear it is only necessary to watch the effects of sounds made by one bee upon others. But I believe bees are deaf to most, or all, the sounds that are made by us.

Soot-gathering by Bees.—Knowing, as I do, how bees will adapt themselves to circumstances, I consider it quite possible for bees to make old soot—that has lost its strength by exposure—a substitute for pollen. Some years ago a bee-keeper told me that his bees sometimes made pellets of fine sawdust on their legs at his sawmill, and carried it to their hives as they did pollen. I remember some one else writing to the B.J. a few years back about bees carrying pellets of sawdust from a mill.—W. LOVEDAY, *Hatfield Heath, Harlow, Essex.*

MAKING AN OBSERVATORY HIVE.

[4671.] Your correspondent "W. C." (Cleckheaton), whose query appears on page 29, will find the particulars he requires on Observatory Hives in *Work*, published by Cassell & Co., La Belle Sauvage, London, E.C. I have no doubt he could get the back numbers from them. Both illustrations and measurements are given in No. 567 (vol. xix). If he wants to make an ordinary hive, with observation flaps, in No. 578.

Trusting this may be of service to a brother bee-keeper. The back numbers are, I believe, 1½d. each.—H. PRIDDIS, *Winchester, Jan.* 27.

(*Correspondence continued on page* 46)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

In the owner of the apiary shown below we have still another bee-keeping gardener, a class of reader whom we always welcome in our ranks. We do this for the good reason that not a few gardeners have a rooted objection to bees in any shape, and such men sometimes do harm to the craft by turning the minds of their employers against having a hive in the garden. For the rest, we need add nothing to Mr. Tew's notes, as follow:—

"As a reader of the B.B.J. for several years—and I have always been much interested in the 'Homes of the Honey Bee' and the general correspondence concerning bee-keeping—it is therefore with pleasure that I forward photo of my apiary, also a few 'notes' on my bee-keeping experiences to go along with the picture in your pages. I purchased my first stock of bees in the spring of 1895, and from this I got a good swarm the same year, in addition to thirty six saleable sections, which I sold at 1s. each; so my first venture yielded a good profit. I find no difficulty in selling my honey at 1s. a section, or per 1-lb. jar., and bee-keeping has proved to be, in my hands, a very interesting and profitable hobby. I am by profession a gardener, and find it a nice pastime for the long winter evenings to make my own hives, and this reduces expenses. I began with hybrid bees, but have since gone in for Ligurians. I find them very gentle, and easy to manipulate, besides being superior honey gatherers. The hive seen in the picture—with a stone pebble on the roof—yielded me 98 lb. of honey in the season of 1901, which is, I think, a 'record' weight from a single hive in this neighbourhood. My total weight of surplus for the past season averaged 55 lb. per hive. With regard to the difficulty some bee-keepers experience in getting bees to take to the supers, I may say mine were all hard at work in the supers when my neighbours were complaining that they could not get their bees up at all. The chief honey sources of our district are beans, white clover, and limes. The little chap seen in the picture is my son and heir (aged three), and he makes himself very busy when there is honey about, and I feel sure he will make a good bee-keeper in time. Anyway, he is not at all afraid of the bees, although he has already had his first sting. My wife also takes considerable interest in the work of the apiary, and helps me very much. She hives the swarms when I am away from home, assists in glazing the sections, bottling the honey, and is a good hand in finding customers. I have, of course, had my failures; but every failure only urges me on to 'try again.' Without being an exhibitor at the big shows, I have been very successful on the local show-bench. Several beginners in this neighbourhood have been supplied with their first stocks of bees from my apiary, and it is my rule to assist them for the first season free

MR. J. TEW'S APIARY, LILLINGTON, LEAMINGTON SPA, WARWICK.

of charge. I find this plan gives them a good start, and am very pleased to say they have all proved successful. I always look forward to the valuable and interesting information derived from the BRITISH BEE JOURNAL, to which I heartily wish every success."

CORRESPONDENCE.

(*Continued from page* 44)

CAN BEES HEAR?

[4672.] Referring to the question, "Can bees hear?" (mentioned last week on page 26), is it not possible that sounds may be perceived without what is usually understood as "a sense of hearing"? I have read that glass has been broken by the sound of the voice of a singer. Again, is it not a fact that goldfish in a small globe have been killed by a loud noise?—WORCESTER, *Spetchley, January* 20.

COMMENTS ON CURRENT TOPICS.

[4673.] *Weather*.—The opening weeks of last year and the opening ones of the present were here wintry in the extreme, and we and the bees had to endure a prolonged snowstorm during which, happily, they were closely confined to the warm precincts of their domestic hearth. Later we have had very considerable variations of temperature. A good few days were mild as May, but they were closely followed by keen frost, severe gales, and periods of rain, sleet, and snow showers. The pale snowdrop, "born of the breath of winter," has made repeated efforts to blossom into full flower, rising even from amid the covering of white which first gave it a name. That everflowering gem of crimson and white, the gowan, persists in blooming, and the tips of the crocus growths show like so many spearheads above the dark loam. All these are emblems, foretastes, predictions of a fuller fruition of Nature's floral bounties.

Some Current Topics.—Mr. Loveday (4646, page 23) must take with a very large grain of salt any advertisement from Ireland, even if signed by a clergyman, offering "Hymettus" honey produced in the Emerald Isle. There can be only *one* Hymettus. It lies in Greece, near Athens, and was famous among the ancients for its honey and its marble. The honey is still said to retain its reputation. I note that he reminds me (page 496) of the truism that "circumstances alter cases." When the circumstances alter, I have no doubt I will be ready to take the question to avizandum, and, if necessary, make the required change. *Here* I use no excluder zinc. Very possibly in Essex I might. Now I work for sections only, but in another set of circumstances I would work only, or at least mainly, for extracted. So, in making the statement I did, I deemed it unnecessary to make any reservation, or modify my assertion by even one single saving clause. While working here I *never will* use excluder zinc, because, like Colonel Walker, I find it a superfluity. In regard to fouling of sections, location, with soil and the kind of forage, must have something to do with soiled and travel-stained comb-honey, as with me such sections are almost—I might say altogether—unknown. Fouling from the cause named in 4645 is a thing I have never seen. It is, perhaps, a bare possibility, but the occurrence is highly improbable. I vote for tits and sparrows being murderers of bees, as I have had ocular demonstration of the fact. The insurance scheme should be made a success. Why does not the B.B.K.A. advertise their lantern slides? I was unaware until the other day they possessed such a boon. The only other full set so far as known to me, though containing some good slides, is behind date.

The Joys of Beekeeping.—A love of Nature cannot fail to be generated in the heart of every true beeman. He lives so much on her favours, and enjoys so much of her beauty and bounty, that his life must become permeated by the fascinating charm of her universal loveliness, and his heart must suck in some of her sweets. He cannot fail to be ennobled, elevated and bettered by her charms, animate and inanimate, which surround him in garden, grove or field, and even on the heathery hillside, while he pursues his avocation. "The hives lend a new meaning to the flowers and the silence, the balm of the air and the rays of the sun. We come to the school of the bees to be taught the pre-occupations of all-powerful Nature, the harmonious concord of the three kingdoms, the indefatigable organisation of life, the lesson of ardent and disinterested work, to appreciate the somewhat vague savour of leisure, and to enjoy the almost unspeakable delights of those immaculate days of summer."

Leaves from My Note-book.—In our miscellaneous reading we frequently come across references to the bee which may be well worth reproducing. I would suggest that a note should be made by any such, and the extract forwarded at leisure on postcard to the B.B.J. office. I think a number of these appearing weekly or monthly (as present Press Cuttings) would prove of considerable interest to many of our readers. It is well known many flowers are unvisited by the bee simply because they supply neither honey nor pollen. One of these is the daisy:—

1. "The vagrant bee but sings
For what he gets thereby;
Nor comes, except he brings
His pocket on his thigh;
Then let him start aside,
And woo some wealthier flower;
The daisy's not his bride,
She hath no honey-dower."

2. An epigram:—

"The qualities rare in a bee that we meet
In an epigram never should fail;
The body should always be little and stout,
And a *sting* should be left in the tail."

3. Keats has a line bearing that certain bees

"Found their sweetest spoils in poison flowers."

Given that that juice, imbibed by man from the flower, would be poisonous and hurtful, could the bees, by putting it through their "factory," convert it into nectar innocuous if partaken of as honey usually is? Can any one make an authoritative statement on the subject?

Mice.—I see that these have been figuring lately, and finding their way into contributors' hives, as they do each successive winter. If proper precautions are taken they should not be able to obtain entrance into a modern bar-frame hive and nest in the coverings on the tops of frames. My summer passage is fully ½ in. deep, and if left so during the winter months they would be a nice temptation to such vermin; but when contracting the slides to about a 3-in. or 4-in. entrance, I tack a piece of perforated zinc over the entrance with an opening of about ½ in. by ⅜ in. This effectually excludes all such intruders. The other day, however, I discovered that one of these "excluders," not tacked on, had been ingeniously tilted, and on removing the roof there was Mrs. Mouse, snugly ensconced in a warm downy nest, which at considerable pains and trouble she had cut and teased out of the woollen wrappings. I could not find it in my heart to kill the "wee, timorous-hearted beastie."

Personal.—So many letters have recently reached me through the B.B.J. office and the post insufficiently directed, that to save our Editor I wish it to be known that my full postal address is:—"D. M. Macdonald, The Schoolhouse, Morinsh, Ballindalloch, N.B." I have, however, written so much over my initials that I still prefer to use them and continue signing my contributions—D. M. M., *Banff.*

CLAIM FOR DAMAGE TO HONEY.

[4674.] Referring to my claim for damage to honey (page 26, January 16, 1649), which the railway company had refused to allow, I now write to say that, after sending in my claim again on the 8th inst., I received the full amount on the 18th. This leads me to believe, what I have often been told, viz., railway companies will not pay for damages if they can help it; and I should advise any bee-keeper having a genuine claim to remember the adage, "If at first you don't succeed, try, try, try again!" for I could very easily have lost mine if I had taken any notice of refusals.—W. ROBERTS, *Ninfield, near Battle, Sussex, January 27.*

PRICES OF BEE-BOOKS.

[4675.] Having for some years past been interested in bee-books, English and foreign, and their market value, I am pleased to answer your correspondent's question in last issue B.B.J. (page 40) There seems to be much misconception in the matter of prices. Some few bee-books of the eighteenth century are not easy to get when wanted, but hardly any can be called valuable, and as not one of them is likely to be put up as a separate lot at any public auction, there cannot be a sharply defined price. Neither of those named by your correspondent is scarce. Keys' "Practical Bee-Master" can be found in the lists of second-hand booksellers at from 3s. to 5s. 6d. The first edition of Thorley's book, known by its first title as "Melisselogia," is often to be had at from 5s. to 7s. 6d. The third and fourth editions seem to be scarcer (I advertised in the B.B.J. some time ago for a copy to complete a series, and had no answer). A bookseller would make no distinction unless asked to find a special edition, when 1s. or 2s. more might be charged. His buying price would be about half those mentioned above. As our Editor remarks, bookstall prices are cheaper.

Sixteenth and seventeenth century bee-books fetch much higher prices when they also treat of other subjects, such as gardening. For instance, a rather expensive London bookseller is now offering a very good copy of Remnant's "Historie of Bees" (1637), one of the most interesting of early bee-books, for 24s., while for a copy of Lawson's "New Orchard and Garden, &c., with the Husbandry of Bees" (1638), his price is more than double.

I shall be happy at any time, with the permission of the Editors B.B.J., to give any of its readers the benefit of my experience; but in many cases it is necessary to see the actual copy before passing judgment.—H. J. O. WALKER (Lieut.-Col.), *Leeford, Budleigh Salterton.*

"A WASTE OF HEATHER!"

[4676.] The words still linger in my memory, though uttered many years ago. They were called up from the vasty deep of forgetfulness by something lately written in the JOURNAL, and, curiously, concurrently with them there ran through some mazes of the brain lines of that lover of Nature, the poet Wordsworth—

> A primrose by a river's brim
> A yellow primrose was to him,
> And it was nothing more.

There are men constituted like Peter Bell—

> 'Tis true, 'tis pity; pity 'tis 'tis true.

To-night, with a heavy coating of snow on the ground, I can *see* that glorious hill side, not as it showed itself to the southern city tourist as *a waste of heather*, but as it can be seen glorified and ennobled by a thousand realities. I can recall what I have witnessed times without number in the lovely autumn when I roamed on the mountain afar and found the very breath of its life-giving ozone an intoxication of delight. In the mind's eye I can see

a vast stretch of heather bloom, its illimitable expanse covered with an infinite number of fair flowers, grand and glorious in their richness and profusion, covering the mountains as with a carpet; gladdening the eye with the magnificent grandeur of their colouring, and the nostril with the wealth and sweetness of their perfume. I can to-night feel its sweet breath pervading the air, as it did on the fair hillside, when its almost overpowering odour was wafted on the gentle zephyr sweet as the breath of a honeycomb. And then what an infinity of light and shade that hillside constantly displayed, adding grace and beauty to the fair scene! There were such browns and pinks, such crimson and gold, such purple and amber among the blooming or withering heather as nowhere else can be witnessed especially when the red sun's sinking rays, with their golden glow, lingered on its purple sheen. Monotony!—seek it where you will, it is not here. For *Calluna vulgaris* is not the only plant we see. In its wide ocean are there not continents of *cinerea* and islands of *tetralix*, with their bell-flowers of varying hue, from light lilac, pink rose, or crimson to amber or dark red—the immortal heather-bells of Scottish song and story? The bilberry and cranberry, with their vivid shiny leaves, make a mosaic of verdant hue here and there; the brake-fern shows in green, brown, or golden patches as the season changes its hue; the mazy nodding heads of myriads of moss-plants display a breadth of glowing, downy, snow-white, shining pure and spotless as the new-fallen snow; and many a bank whereon the wild thyme blows adds beauty and diversity to the scene.

Fruits abound in profusion. Wild strawberries grow at a high altitude with their red ripe luscious fruit; cranberries in extensive beds adorn the fair slopes with their crisp green leaves, sweet flowers and tasty fruit; blackberries lush and tempting, call up memories of youth's merry time; crowberries black as their namesake are found singly and in clusters. Juniper bushes abound, all one mass of grey, dun or green berries. Bog myrtle with its rich perfume, and its friend with its wealth of autumn berries, is strongly in evidence. The fair rowan tree with its bonnie berries red adorns the rocky dell; the wild rose with its hips and haws, food for many a bird; the bramble bush spreading its tempting fruit to schoolboys' eager hands; and the wild rasp are all found in countless thousands in many a bosky den. A waste of heather! Why I could name a hundred fair flowers fair amongst the fairest of Flora's daughters which meet you, perpetually adding grace, beauty, and variety to the scene. Low down, the yellow golden cup of the marsh marigold forms extensive beds; anemones grow in wild profusion, vetches in great variety are seen in bud, bloom, or pod. An occasional graceful spirea waves its many seeded spikes; the lovely grass of Parnassus, which is not a grass but an exquisite flower, adorns many a marshy spot, an occasional blue speedwell, bluer violet, or Scotch bluebell brightens the duller shades. Higher still, the Alpine gentian, silene, a catch fly, can be seen if looked for, while the glorious furze and bonnie broom stand out prominent. Sedums, mosses, rare ferns, wild grasses, are with us as we mount towards the higher heights. Gay eyebright raises its vivid corona, staring the sun without once winking at its fiercest rays. The fair white downy crest of the moss plant waves its snowy heads innumerable—nodding like Wordsworth's daffodils—in the gentlest breeze. The Alpine Veronica displays its lovely blue corolla even on the verge of dissolving snows; the forget-me-not of the mountain summit, whose tints far excel those of its namesake of the brooks; the woodsia, with its tufted frond, adorning the clefts of the rocks; the sunny gentian, concealing its eye of blue in the ledges of the steep crags; the Alpine astralagus, enlivening the turf with its purple clusters; the lychnis, choosing the stony and dry knoll for the evolution of its pink petals; the sonchus mulgedium, raising its stately stalk and azure head in spots which try the enthusiasm of the adventurous collector; the pale flowered mountain sorrel; the azalea, forming a carpet of the richest crimson; the saxifrages, with their yellow, or white, or pink blossoms, clothing the sides of the streams; the saussurea and erigerm, crowning the rocks with their purple and pink heads; the purple cinquefoil, blending its yellow flowers with the white of the alpine cerastiums and the bright blue of the stony veronica, the stemless silene giving a pink and velvety covering to the decomposing granite; the yellow hawkweeds, whose varied transitions forms have furnished such a fertile source of dispute among botanists; the slender and delicate grasses, the chickweeds, the sedges, and the rushes, which spring up on the Alpine summits, the graceful ferns, the tiny mosses, with their urn-like sheaths, and the crustaceous dry lichens."

All these and many more add a charm to the heathery hillside. *Here*, and not on our well-tilled fields or even our fair meadows, is the place to botanise. To one who has the eye to see, the *waste* become a living picture of some of nature's fairest fauna and flora.—F. E. I. S.

NOTES FROM MERIONETH.

HOPES AND ANXIETIES.

[4677.] When I penned my last "Notes" the weather was very severe, and my bees suffering much, and the adverse circumstances made me very anxious about their welfare. The present winter will be a memorable one in these parts. The Bala and Festiniog Railway was blocked by deep snowdrifts twice, even a powerful snow-plough was made a prisoner while attempting to raise the

blockade. The heavy snowfall was followed by heavy rains and strong floods, which carried large stones and trees with them. I read in a local paper that the village of Bangor-is-y-Coed was isolated, the cellars of public-houses being overflooded and the beer-barrels therein being thus disengaged, went for a cruise on their own account. In the second week of this month another change came in the shape of mild and misty weather, and our bees came out for a flight, and the crocuses made their appearance as the harbingers of spring. A gentle breeze from the south cleared the mist and revived the dying embers of hopes.

The above favourable weather prompted the bees to carry out the dead, which, alas! were many. The quilts were dried or replaced by new ones, also fresh cakes of candy were given where needed. As soon as these operations were over, another change came. Now the snow is falling fast.—J. B. WILLIAMS, *Gelli Lydan, January* 25.

Queries and Replies.

[2787.] *Doubling and Storifying.*—I have an ambition to try my skill with the "Storifying" operation this coming spring, but the process as explained in the "Guide Book" is not, I am sorry to say, understandable by my, I fear, dull comprehension on several points. I would therefore be very grateful to you if you would kindly help me. First, then, on page 62 it is stated: "Outer cases are put on to protect the hives from the weather." 1. Does this mean that one wooden covering should enclose the whole four hives as they are placed one above the other? Then, again: "As the populations are enormous the fronts have to be raised, as in fig. 34, by means of wedges about an inch high, to give the bees access on three sides." 2. Fig. 34 does not seem to me to show how the wedges are placed. Finally, "The outer casing is also raised to allow a free circulation of air, and the separate cases placed as in fig. 35." 3. This seems to imply that each hive as placed one on the top of the other should have a separate case. If that is so, it is difficult to see how the wedges are to be used, and at the same time manipulate these outer cases, as in fig. 35. In anticipation of your kind indulgence in an early issue of the B.B.J., I beg to offer you my best thanks.—APIS MELLIFICA, *Woughton-on-the-Green, Bletchley, January* 27.

REPLY.—1. Yes; what you term "wooden covering" is in sections as shown in fig. 34, and four of these, which are properly called "outer cases," cover the four hives shown in the cut. By referring to fig. 13 (page 38) it will be seen that two sections of the outer case cover the brood-chamber and a rack of sections. There is thus no difficulty in understanding what is meant by outer cases. In fact, if our correspondent could see either a "Cowan" or a "W. B. C." hive, both of which have these outer cases, his trouble would disappear. 2. The "wedges" being simply used for the purpose of raising the hive up in front an inch from its floorboard, the mode of inserting them will be obvious when the actual hive is being dealt with. 3. Our correspondent will, we hope, pardon us for again assuring him that no difficulty whatever will arise in understanding the plain and simple directions in "Guide Book" when the actual hive referred to is before him.

[2788.] *Working for Increase.*—Many thanks for your help in my last question. Will you kindly help me again in the following? I have one stock of bees, well established in a frame-hive, and I want to increase my stocks as much as possible this year. I therefore ask:—1. Would it be safe to make two artificial swarms from this one hive? 2. When is the earliest date on which I may safely make the first transfer, and when the second? 3. Must I re-queen the queenless hive, or can I trust them to rear one themselves? 4. If I make two swarms from the one hive, shall I get as much surplus honey from the three hives together as I should from the original if untouched? I intend to work for sections (if I get any surplus at all this year). I live on a hill overlooking a valley filled with pasture, orchards, and gardens; a few yards away is a hill covered with about 1,000 acres of gorse; within a radius of a mile are thousands of lime and chestnut trees, also gardens which in summer are very gay with flowers. In the autumn there is any amount of ivy bloom. I think I am in an ideal place for bees. What do you think? 5. When do you think I must put on supers after I have swarmed the hive?—J. L. SAXBY, *Clevedon, January* 22.

REPLY.—Instead of giving replies to each of the first four queries enumerated above, we think it will be more helpful to say that in view of our correspondent possessing one stock only, and being also desirous of obtaining surplus-honey in the coming season, he had better make up his mind beforehand whether he prefers a moderate increase and some surplus, or to "increase stocks as much as possible." We put the question because he cannot have both. If we are informed on this point it will save us trouble in giving advice that may not be acted on. There is ample time to make this clear before the date of starting operations by way of dividing stocks or making artificial swarms. With regard to the final question (5) we may at once say that we think it improbable that the hive will "require supers" at all after having had a couple of artificial swarms made from it.

Echoes from the Hives.

Newton-le-Willows, Lancs., January 25.—Last Saturday (January 18), the weather being very mild and bees flying, I took a peep to see how they were off for stores; although greatly diminished, food will last till near spring. While looking through one hive (queen hatched last September) I noticed a patch of sealed brood, also some eggs, though I was not looking for same. Like your correspondents "C. M." and Mr. Walpole-Simmons, I should like to see a discussion on large frames, as I intend trying some during this next summer. Of course, my present extractor would be useless for extracting the honey from them, but as I intend making some frames 14 in. by 11 in., and using the 3-in. eke under the ordinary brood-body. It will not interfere with my supers for extracting, as the large frames will only be for breeding purposes. I shall be pleased to join the insurance scheme; paper enclosed.—H. WALKER.

Alderley, Wotton-under-Edge, Glos., January 25.—Bees have come through the winter well, so far; no losses among mine. They have also had a few good cleansing flights during past week. Weather changed again yesterday. Snowdrops, winter aconite, crocus just coming through the ground; catkins of hazel well in bloom. Everything outside now covered with snow; and sharp frosts; changeable, but seasonable.—HUGH LANCE.

Terrington, St. Clements, Lynn, January 26.—The hives have been "singing" well this week, and no mistake. The mild weather and dry days having given the bees an opportunity of a flight, every wallflower has been visited in search of pollen. A useful plant growing here is *Petasites fragrans* (syn. *Tussilago fragrans*), it has been covered with bees every day this week. It will grow anywhere; indeed, it is a rank weed in the open garden, but under trees or in shade, will produce luxuriant growth during summer and a wealth of flowers at this season of the year. A fortnight ago I gave a fresh lb. of candy to some driven bees. This week have been re-arranging some of the hives and examining candy of driven stocks. I found the glazed section emptied of its candy, and in its place a fine white piece of worked comb constructed right across the section-box I use for the candy, and some of the cells half filled with honey. Is this not unusual activity at this time of the year? [Unusual, but not rare.—EDS.].—W. J. BELDERSON.

PRESS CUTTINGS.

BEE-KEEPING STATISTICS IN IRELAND.

The inquiries made in the preceding fifteen years relative to the extent to which bee-keeping is followed in Ireland, and the degree of success attained in this special branch of rural economy, were repeated last year with reference to the season of 1900. According to the returns received, the quantity of honey produced in 1900 was nearly double the average quantity for the preceding ten years. It was, however, 16·4 per cent. below the quantity for the year 1899, the returns for which showed an increase of 41·7 per cent. as compared with the quantity in 1898. The quantity of honey produced, according to the return, was 623,559 lb.; of this, 143,368 lb. were produced in the province of Leinster, 211,821 lb. in Munster, 155,962 lb. in Ulster, and 112,408 lb. in Connaught. Of the 623,559 lb., 403,207 lb. were produced "in hives having movable combs," and 220,352 lb. "in other hives." It was stated that 260,074 lb. was "run honey," and 363 485 lb. "section honey." According to the returns collected, there were 6,743 lb. of wax manufactured in 1900, of which 3,394 lb. were from hives having movable combs, and 3,349 lb. from other hives. The returns received in 1900 gave the quantity of honey produced in 1899 as 745,692 lb.; the number of stocks brought through the winter of 1899-1900 as 31,045; and the quantity of wax manufactured in 1899 as 4,873 lb.—*Northern Whig.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

CHAS. O'HARA (Belturbet).—"*Our Wild Bees.*"—The numbers of the B.B.J. in which Mr. Sladen's articles on this subject appeared will be given in next week's issue.

IGNORAMUS (Wandsworth, S.W.).—*Starting Bee-keeping.*—The best time to purchase a stock of bees—for securing the advantage of the early fruit-bloom in your neighbourhood—will be about the first week in March. You will thus reap the benefit of the "spurt" of energy bees always develop on changing their location. Be sure, however, to get a strong, healthy colony to start with, and purchase from a reliable man who knows how to pack the hive for transit.

G. F. (Kenilworth).—"*Notes*" *and* "*Echoes.*"—We shall be very pleased to have a "Note" or an "Echo" from your locality for publication whenever you have anything of use or interest to communicate. It goes without saying that contributions from those whose practical experience of apiarian work is so extensive as we know yours to be are always of value to readers.

Editorial, Notices, &c.

FREE DISCUSSION.

We are rather sorry than otherwise to note a tendency to revive the perennial notion that this journal will not allow what is termed "free discussion" on the question of the desirability of adopting a frame for use in hives other than the "Standard" frame of the British Bee-keepers' Association. The letter of our correspondent "J. D." (4685, p. 57) is only one of several that have recently appeared in our pages, and we have refrained from expressing any opinion thereon by way of a line or two of "footnote." We hope to deal with the matter at some length next week. Meantime we only refer to it here in order to show that we have no intention of allowing it to go forth that free discussion, *where useful*, is debarred in our columns.

AN OBSERVATORY HIVE.

MY THIRD SEASON'S "OBSERVATIONS."

By Col. H. J. O. Walker.

Previous observations have been recorded on page 66, vol. xxviii., and page 12, vol. xxix., B.B J., to which I beg to refer any one desiring a description of my hive. Repetition will be avoided as far as possible.

The past year's experience was very remarkable, owing to the free way in which fancy combs were built on the glass. In these combs two queens and twenty drones and workers went through their developments, and no less than forty queens in all were reared in the hive, which was stocked on May 18 with part of a colony under a young imported Cyprian queen. I do not recommend Cyprians for observatory purposes. I found them nervous and excitable, especially if exposed for long to the light. While being handled they are just what they were in past years; that is, very quiet and peaceable as long as nothing is done to annoy them, but when shaken or brushed off the combs they begin to fight, and once aroused their fury knows no bounds. Yet I owe so much pleasure to these little strangers that I am unwilling to speak evil of them.

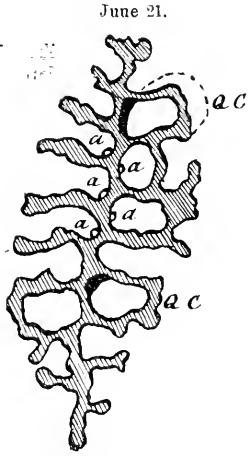


Fig. 1.

By June 21 the hive was full of bees; brood hatching freely; three queen cells being sealed, and more in progress, the queen laying at the average rate of seventeen seconds, eggs and brood (mostly drone), in two combs on the glass. There was also a third comb, and in this I noticed for the first time that day small drops of fluid in seven cells, so I at once took the tracing reproduced and marked A (fig. 1). The five drops each marked *a* were of almost translucent fluid; the other two, shown dark in the two cells *Q C* were bright milky white; no larvæ were discernible in any of them. I much regret that I cannot say from observation whether the cells now thus occupied were empty on the 20th. My attention had been fixed on the other combs, in which breeding had been going on. The comb was a small one, and had been empty for some time, and I had not observed it minutely although I had seen it daily. But it should be mentioned that it is not always possible to see eggs laid in cells built on the glass, as they may be hidden in a hollow. The milk-white drops were a little larger than the translucent, and they increased in size very quickly, while the translucent remained almost the same, and on the next day (22nd), I suddenly realised that the cells marked *Q C* were incipient queen cells. On the 23rd the base of the queen cells was completely covered with cream, as fully so as appears in the illustration B from a photo not taken till the 26th. On same day, 23rd, semi-translucent fluid was visible in cells A A (fig. 2). On 24th all the larvæ not in queen cells were visible, having, so to speak, grown *out* of their fluid. The 25th, both queen cells sealed. The 26th, the larvæ just under top queen cell had vanished, the rest sealed, except *b* larvæ, to be seen still curled up, whilst the others are stretched lengthways in their cells, spinning their cocoons—some head outwards, some

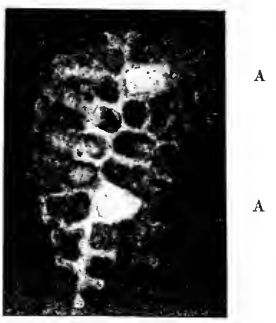


Fig. 2.

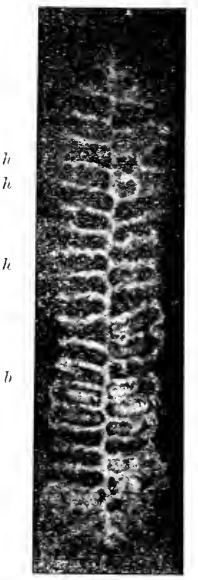


Fig. 3.

head towards the base of the cell. On the 27th *b* larvæ also sealed.

Now all the larvæ except those in the queen-cells were drone, and would take a day longer in sealing than the queen-larvæ, the respective time in larval state being usually about six and five days respectively; so we may take it for granted that all the eggs were laid on, or very near the 17th, and that when the fluid was first noticed on the 21st the larvæ were about one day old. From the fact that the fluid in the queen-cells was from the very first of the same bright white cream-like appearance that it afterwards maintained, and that the fluid in the other cells was never cream-like at all, but comparatively translucent, I gather that drone-larvæ are *not* fed until weaned with the same royal jelly as is given to queen-larvæ, but with a fluid decidedly less rich in quality.

Another observation confirms this. While watching a very young larva at the bottom of its cell, in which no liquid food was discernable, I saw a worker enter. The glass happened to be very clear, and with my binocular glasses I could see its movements very plainly. It placed its head near to but not touching the larva, and then worked its mandibles vigorously, until in a few seconds a drop of almost clear fluid appeared between them. It then lowered its head so as to touch the larva, over which the drop spread. Shortly afterwards the worker left the cell. The working of the mandibles would appear to indicate the pressure necessary to produce the secretion from the sub-maxillary gland, System No. 1, to be mixed with the chyle food on which very young larvæ are fed. I consider myself very fortunate to have been able this once to watch the process of feeding.

Happening, on the 24th, to have on hand a surplus queen, a fine young Ligurian, and being reluctant to destroy her, I introduced her through the feed-hole at 7 p.m. I failed to detect any unusual movement in the hive that night; nor could I see either queen, the hive being very full; but I had seen the old queen laying at 5 p.m. Next morning, to my great astonishment, *both* queens had vanished! There is no mistake. No queen at all was to be seen for several days, and the hive, in due course, swarmed under a young one.

On the 27th and 28th the royal jelly in the queen cells, shown cream-like in the photo, had turned golden yellow; it wrinkled and cracked across, shrinking towards the sides of the cell basis, so that the nymph in the upper cell, the clearer of the two, was visible. On July 2, the young queen in the upper cell was moving about, her body a fine yellow with dark stripes. Her last moulted skin lay at the base of the cell in the form of a loose pellet. On that day I first saw how young queens are fed while prisoners in their cells, a fascinating performance which was frequently repeated. The only writer who has hitherto described it, as far as I know, is Huber, who, indeed, managed to see most things; he says he saw it by chance.

While watching a queen-cell I saw the fine point of the young queen's tongue pierce through the crust of the cell at the lower end, where, it should be remembered, the workers always pare away most of the wax as soon as the larva takes on the form of a nymph. A worker fed this little tongue from between its mandibles, and soon after it was withdrawn, leaving a little pin-hole, the sides of which shone with some of the liquid supplied. In a second a worker had closed up the hole with wax scraped from the cell. In this way the workers can keep young queens in confinement for as long as may be convenient, and they probably do so in every hive where two or more queens are reared simultaneously. Although there is always a surplus of food remaining at the bottom of the cell, it is of no use to the prisoners. Not only is it too dry and hard, but the queens cannot reach it; they appear not to be able to turn in their cell. At least, in the two cases under observation, the movement was always up and down, the head always towards the point of the cell, as in the case of drones and workers. One of these two queens was fed as described from July 2 to the 8th, when she came out and went off with a swarm; the other till the 13th, when I broke the cell in removing the glass to clean it. She was thus twelve days in confinement.

After the mysterious disappearance of the two fertile queens on June 24, several more queen-cells were built. It was impossible to determine the order of their construction as the hive was now crowded with drones and workers. On the 29th the first young queen appeared, and spent the day in running about the hive, unheeded by the workers. At noon on the 30th some of the imprisoned queens began to "pipe." Four different cries were plainly to be heard; the general effect was curiously like that of as many foghorns from steamers feeling their way into harbour on a foggy night. At 2.15 two queens were running about excitedly; they appeared to be seeking each other, but would not close in fight. Sometimes one would clutch at a worker. Once the two closed, only to separate and pass on. This continued for some minutes, the bees remaining indifferent, except when hustled by one of the queens as she hurried by.

Suddenly a kind of shiver passed over the comb on which both queens were running; an excited tumult arose, and the bees quickly gathed into knots around each queen. I saw one pressed against the glass and a worker hanging on to her hind leg. Then both queens were free. Then one was clutched by two bees, whose bodies curved in towards her in threatening fashion. Presently I saw a queen deep in the centre of a knot away from the glass; the bees crowded in and hid her from my sight. Then the other queen ran about

with an occasional scuffle till she too disappeared. And all the time their imprisoned sisters were sounding their quaint foghorns. Once, too, I heard a balled queen "piping" shrilly.

The next day was fine and sunny; one of my outdoor hives swarmed. Indoors one queen only was at liberty; the other probably balled to death and thrown out. The survivor was calmer. She took honey from open cells, no attention being paid to her. July 2, wet and dull; the 3rd, a swarm under this young queen. It was secured and joined to a queenless hive. Another swarm on 6th, another on the 8th with three queens, and on the 10th one with two queens. On the 13th I took off the glasses to clean them, several queens coming out under cover of the disturbance. On the 15th five queens were on the move; the 17th only one queen was left in the hive, and no queen cells.

Many struggles and much "balling" took place before all the forty young queens were disposed of. Balling with an intent to kill is a distressing sight; but the workers often "ball" merely to catch the young queens and keep them quiet. These wild maidens race about without ceasing and without caring whither. In their impetuous excitement they plough along the bee-covered combs, leaving a furrow of excitement plainly visible behind them, until the workers, jostled out of all patience, turn upon them, and, keeping them in friendly durance, win a few minutes' peace. I saw but one dead princess; there the knot had separated, and the workers were licking the corpse.

(*Conclusion in our next issue.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

OUT-APIARIES.

HOW TO WORK THEM PROFITABLY.

[4678.] In answer to our friend Woodley (4667, page 42) on the management of out-apiaries let me say, I find no difficulty at all as I have every facility for moving bees to and fro from Somersham, possessing a good horse and cart, which is essential. I have a good friend and neighbour who helps me. My out-apiaries, three in number, contain respectively thirty-four, twenty-two, and eighteen colonies of bees, are located on good roads. They are situated eleven, sixteen, and eighteen miles from Somersham. One (a disused gravel-pit) is on the Cambridge road; No. 2 is located in a garden about five miles farther on, and the third (about two miles farther on) stands in a cottager's garden of about half an acre. In the last-named place I have a good large manipulating house to hold a full stock of frames, foundation, &c.; and here I can rig up a bed and stay the night. I call it "my summer residence." When I camp out there for the night I usually have a good time; a small barrel of mead occupies a corner of my "residence," and after the day's work is over labourers on the estate come and sample the same and smoke a pipe with me. On these occasions I always give them some honey and answer any question on bee-culture that they may want information on. I also usually relate the latest political or war news. I must also tell you these men are seven miles from a railway station, and until quite recently had to pay a halfpenny extra on every letter brought to them. With regard to my methods of working these out-apiaries the hives each hold twelve frames—I generally reduce the number to ten in the winter. The two frames of honey removed from each in this way I use for building up "driven stocks" from bees headed by young queens. In the following spring I give back to each stock two frames with full sheets of foundation to make up the twelve frames again, and in the month of May I put on my section-racks. When the sections are about half filled with honey I raise them up, and place a box of shallow-frames underneath (not forgetting to put on a sheet of excluder zinc between brood and surplus chambers. About a week later (if weather is good) I take off sections and give another box of shallow-frames below the first one. In fourteen days from that I can extract the top one, and simply lift the bottom one up and put extracted one underneath (the shallow-frame boxes each hold twelve frames), I do not extract any more until the honey harvest is over. I do this not wishing to disturb the hives unnecessarily, as I find that bees are always better tempered with full supers on than when they have empty combs. By taking these precautions one not only keeps good friends with the farmer, but the honey has improved in ripeness and quality by remaining on the hive.

On September 5 last year my neighbour and myself went up and extracted 12½ cwt. of honey in two nights! It was a beautiful clear moonlight night, and we both worked for "all we were worth" until 2.30 a.m. My friend then said "we ought to have a five minutes' rest." We had rather a long five minutes ("the spirit was willing, but the flesh weak"), for we had dropped asleep and did not wake until 5 a.m.," then at it again, and all cleared off before eight o'clock. Then we loaded up and started for Somersham, eighteen miles distant. The good wife had everything in readiness, the honey was bottled up in time for the "Confectioners'" Show in London.

My advice to bee-keepers who wish to start an out-apiary may be enumerated thus:—1. Be prepared for hard work and have hives that

will hold eleven or twelve frames. 2. Let each be headed by a queen, if possible. 3. Super in advance (sections preferred). 4. Have a good caretaker to look out for swarms. 5. Have all your supers fitted and in readiness for use beforehand with skeps to hive your swarms. 6. Leave addressed post-cards with the caretaker, and do not forget to give him a "sweetener" now and then, something rather more "solid" than honey. 7. Do not annoy your friends, the farmers, by over manipulations. If these points are attended to your out-apiaries will become a pleasure and a profit securing you health and wealth while keeping you "far from the madding crowd." The bee-flora in the districts where my apiaries are situated consists of white clover, sainfoin, beans, and also trefoil, which latter, I consider, is the most dense honey of any.

I may say in conclusion we are having rather severe weather here, but I know the bees are all well supplied with food, and their "master" is preparing a lot of work for them in the summer to come. I am busy getting sections, hives, and frames ready. Wishing all brother bee-keepers a prosperous season.—R. Brown, *Flora Apiary, Somersham, Hunts.*

P.S.—I am very pleased to read of a scheme for insurance for bee-keepers against accident with bees. I hope people that are not bee-keepers will not take advantage of it. I most willingly insure all my stocks in my out-apiaries, and it behoves every bee-keeper to do so, as people very often are careless with bees in small apiaries through over manipulation.

BEES AND POISONOUS FLOWERS.

[4679.] In reply to that very interesting article (4673) in Bee Journal of January 30, on page 37, in which your correspondent "D. M. M." quotes a line from Keats and asks for an authoritative statement concerning the effect of eating honey obtained from poisonous plants I would offer the following remarks :—I have had an extended experience in the cultivation of the most poisonous plants it is possible to produce under natural conditions in England and I feel I have had special facilities for observing the amount of patronage poisonous plants receive from the honey-bee. Firstly, I feel justified in endorsing the quotation (that bees find their sweetest spoils in poison flowers), as during the flowering seasons of the Hyoscyamus niger, Atropa belladonna, Datura stramonium, Aconitum napellus, Papaver rhœas, Papaver somniferum, Digitalis purpurea, &c, from which is obtained the following poisonous substances respectively: Hyoscyamine, atropine, daturine, aconitine, rhœadine, morphine, and digitoxine. I have constantly observed the bees in great numbers busying themselves among these flowers, and it happens, indeed, too frequently in the gathering that an unseen bee is taken into the hand together with the blossom.

And as the poisonous plants above referred to mostly belong to the natural orders, Solanaceæ and Scrophulariaceæ, the flowers are more or less bell-shaped, and consequently offer good shelter for the bee whilst at work, and if the honey is in proportion to the sweetness observed when the base of the petals is placed to the lips, they must be honey-givers of no mean order (the foxglove, especially, illustrates this). With reference to the poisonous juice referred to in Mr. Macdonald's article, I should like to point out that it is an invariable rule that roots contain a much greater percentage of the active poison than the stem or leaves, and the flowers even less than the latter. And as the poison characteristic to a plant is not found upon the surface of the flowers, but beneath the epidermis or skin, it is necessary to submit the flower to a pulping process before it can be extracted, so that it is impossible for the bee to take into its "factory" more than the very faintest trace of poison, if indeed any.

I mention "the very faintest trace," presuming that it may find its way to the surface in the process of respiration or transpiration of the flower, but even this theory is most unlikely. Another point which may be of interest to many readers is the fact that poisons of the most virulent nature do not affect living creatures alike; for instance, the heather grub can be found living in the root of the Hyoscyamus niger, and is, in my opinion, its favourite food. Again, the dried roots of belladonna and aconite are frequently found to be densely populated with grubs, which have every appearance of being healthy; likewise in the fruit of the hemlock (Conium maculatum) we find these pests, although it was by this poison Socrates met his notorious death 400 B.C.

In comparison with the above, it may appear striking that parsley, which is a constituent of many dishes, should be deadly poison to the parrot. Contrary to the above theory, we are told that poisoning did occur in California through eating honey gathered from poisonous plants, and also we read of the destruction of the Grecian army under Xenophon from that cause; but from the above proofs the extraction of the characteristic alkaloidal poison of the plant by the bee from the nectariferous gland is impossible, and to any who wish to still believe in the above cases I would ask them if the poison has as yet been isolated, or would they wish us to believe in French and Italian history, as many do, which states that poisons used by Catherine de Medici, the Marchioness de Brinvilliers, and others are unknown to scientists to-day? To them I would say the poisons then used were few, the methods of detection practically none.

Finally, I wish to thank Mr. William Heming, of North Littleton, Evesham, in whose medicinal gardens my principal observations on the above subject have been made. —H. S. Shorthouse, M.P.S., F.C.S., *Birmingham, February* 1.

SOME ESSEX NOTES.

[4680.] *About Foul Brood.*—A peculiarity of the season of 1901 was its effect upon foul brood. It is pretty generally known that a good season for surplus honey is the greatest possible help in ridding us of this pest, but I cannot remember a season prior to 1901 in which bees were, with so little help from the bee-keeper, able to rid themselves of this disease. I am afraid, however, that even that bit of good fortune may have had its disadvantages, disguised, no doubt, in the rapid filling of empty cells with honey before the dried scale of foul brood could be thoroughly removed by the bees.

This being the, more than probable, case, it becomes more than ever necessary to keep a watchful eye this spring upon all stocks that are known to have been effected with foul brood last year, seeing that the disease germs at present buried at the base of cells of honey will come in contact with the brood a little later. Judging by what appears in the B.B.J., foul brood seems to have been in season all this winter; therefore, by referring to several cases seen by myself last year my remarks cannot be considered out of place, and some lessons may possibly be learned therefrom. To begin with case (*A.*) This was one of two stocks owned by a widow. The two hives were on one stand, and only stood apart by inches. The combs were old and the stock weak in bees, the disease having reached the last stages, but the other stock remained healthy. I had a free hand, so fire consumed everything. In talking about bees afterwards, the old lady said, "Poor Harry" (her late husband), "put the bees in that hive afore he died, and I dessay they ain't been took out since." So these bees had been kept on the let-alone system for fourteen years. Later in the spring I found another bad case three-quarters of a mile from this one. (*B.*) In this case the owner is a good bee-keeper, though almost a beginner. Finding his dozen or so stocks nearly all badly diseased, he was naturally downcast, but sought help and spared no trouble till a complete cure was effected. Not only so, but he scoured the district till the stock from which his bees imported the disease was found. In this case the disease did not reach the foul stage in any of the stocks affected.

(*C.*) Here I found one of four stocks packed close together, very badly affected. The owner was away from home, and I was asked to do what was best. But though I went a long way out of my way to destroy this stock, and thoroughly scorch the inside of the hive—a new one—nothing at all was done by way of carrying out instructions by the people in charge, and later I found another stock affected. (*D.*) Here the affected stock was the only *live* colony the owner possessed, though a number of empty hives were standing in corners of the garden (this always makes one feel suspicious), but this stock was healthy in the previous year. I was unable to get permission to do anything for these bees, but I put in a dose of napthaline, and the bees appear to have set to work to clear out the diseased brood. In the autumn I expected to find the bees had either died out or been robbed out, but they were strong, and I could only find one diseased larva.

(*E.*) In this case also, no permission was given to treat the stock, which, though badly diseased and weak, had a young queen, and the disease was not of old standing. These bees did what they could to help themselves, and by the aid of a dose of napthaline and a good season, were free from foul brood in the autumn.

(*F.*) Here half the stock of a fairly large apiary were diseased, and I understood that foul brood had been in the apiary, more or less for some years. This being so, I fear that, through lack of thoroughness, the owner will never get rid of it. He will find that a few well-kept hives will yield real pleasure for his leisure hours.

(*G.*) In this case the owner admitted that he had many more stocks of bees than he can keep well. Many of them were badly diseased, and I found that the wrong kind of naphthaline had been used when any was used at all. Some attempts were made to assist the bees during the summer by using preventives and the bees were in much better condition in the autumn.

(*H.*) This bee-keeper seems to have had foul brood from his start in the craft. I had been afraid he would have it till the end, but he woke himself up last season and cleared the disease out, and got his bees into quite good trim. The one stock found to be slightly affected in autumn he decided to destroy for the sake of the others.

(*I.*) Here the owner has several irons in the fire—more than he can look after. There was disease of old standing in the hives—some might truly be said to be rotten. I left him a copy of Leaflet No. 32 issued by the Board of Agriculture, and he made an effort to rid himself of foul brood. The result was quite encouraging, for in the autumn only two or three stocks were found slightly affected. But here I feel sure the efforts of last season will be of little use unless followed up by strong measures and a watchful eye for years to come, as the disease was not only bad in individual cases, but was also of old standing. I learned in conversation that So-and-so's bees, a mile away, had "gone wrong with some disease."

(*J.*) Here I was informed on arrival that one lot of bees were dead, so we examined this (skep) last. This was a bad case of foul brood, and the bees had been robbed when they became weak. As there are two other apiaries quite near the consequences may be serious.

(*K.*) This was another bee-keeper who seems quite unable to realise the serious nature of

foul brood, and who, having had the disease in his hives for several years, I am afraid will have it as long as he has bees.

(*L.*) This bee-keeper being an enthusiastic beginner, I felt sorry, as he was striving against tremendous odds. Another owner of bees quite near had some stocks in a bad way. They died out, and bees of *L.* could rob the hives. If the owner of the dead stocks knew anything of the nature of foul brood, he was quite indifferent to the consequences, for the hives were emptied of their rotten combs on the garden as one would empty a barrow load of manure, and the combs were left exposed in this way for some time.

(*M.*) (Another beginner) I felt sorry here, too, for a bad start is discouraging. The hives within half a mile of (*L.*) probably the bees, a swarm, imported foul brood from the same source as *L.*'s stock.

(*N.*) Here I found a stock badly diseased, gave instructions to the owner, and handed him a copy of the leaflet on foul brood. In the autumn I found that nothing had been done, and, as the hive in which I found foul brood in the spring was minus bees, the bees from the hives of two cottagers, who keep bees quite near, had probably helped the bees from the owner's other hives to rob the diseased stock, so it may prove a serious matter for the cottagers. For *N.*, a gentleman of good position and education, any excuse offered could only be a lame one.—Wm. Loveday, *Hatfield Heath, Harlow, Essex.*

INSURANCE FOR BEE KEEPERS.

[4681.] I do not know whether what I have to say on this matter may seem to you worth printing, but I do know that it represents what is in the mind of many bee-keepers. Before pledging ourselves to join in the proposed scheme, it seems to us that particulars of what risks are to be undertaken, should be given, or, at any rate, an idea of the kind of risks.

I will enumerate three typical cases, and inquire whether, for instance, compensation for accidents like them is comtemplated. 1. A passer-by is stung badly as he goes along the road, which borders on a garden in which is an apiary. 2. A yoke of horses are stung, ploughing or reaping, in a field adjoining the said garden. 3. Though carefully packed, bees escaping from hives on their way to the moors, sting the railway company's servants at the station.

There is also another point. In each of these three cases, smooth words and a timely present of cash would probably settle matters. But would the insurance scheme come in under such an arrangement or would only damages be paid as awarded by a court of law?

If you could see your way to making matters of this sort clearer, it would help many of us to determine to fall in with the Council's scheme, I feel sure. Our own servants we naturally protect by an insurance under the Employers' Liability Act. But we should, most of us, be very glad to make ourselves safe as regards outside risks.

It is possible that some particulars have been published which have escaped my notice, and in that case I must apologise for troubling you.—Sidney Smith, *Wheldrake Rectory, York, February 3.*

[The only particulars published so far appear in the report of the meeting of the Council of the British Bee-keepers' Association on page 31 of our issue for January 25. And—seeing that the whole scheme is being dealt with by the Council—it could not be in better or more appropriate hands. So soon, therefore, as the Council are sufficiently informed as regarding the probable amount of support likely to be extended by bee-keepers the proposed "Rules and Regulations" will be formulated for approval, and published in our pages.—Eds.]

[4682.] When I purchase my weekly *Tit Bits* I obtain therewith an insurance coupon entitling me to a sum of £200 if I am killed in a railway accident. Other "weeklies" have followed suit, and some insure for much higher amounts. The thought has, therefore, passed through my mind why should not the proprietor of the B.B.J. insure his bee-keeping friends against claims which may be made on his subscribers to the journal?

If an insurance society can take the risks of bee-keepers for 1d. per hive per annum, I should think a small sum paid down annually by him would clear readers who subscribe to the paper. Such a scheme would doubtless add some thousands to the circulation when it became known, and thus prove a mutual benefit to one and all; whilst the bees, which are said not to hear, would know nothing at all about it.—W. W. Kay, *Woodbines Apiary, St. Brelades, Jersey, February 3.*

[With reference to the above, we have only to say that the Bee Journal, unfortunately (or fortunately, it may be), cannot insure its readers against "risks" connected with their bee-keeping in the easy way suggested, however nice and easy it might be for the said readers, seeing that there is little or no analogy between the cases. This will, no doubt, be so obvious to the bulk of those who subscribe to our journal that it is hardly needful to say more unless it should be thought necessary to explain the difference, in which case we will be very pleased to do so.—Eds.]

BEE FALLACIES.

[4683] Lieut.-Colonel Walker's interesting letter under the heading "Maeterlinck and the Drone" in your issue of January 16 (4645) recalls other equally inaccurate theories regarding not only that much-despised, though indispensable occupant of a prosperous colony

—the drone, but also regarding the queen, the workers, and those products which are the result of their united efforts. At the time this letter appeared I happened to be reading Oliver Goldsmith's account of bee life as it is given in "A History of the Earth and Animated Nature" (London, 1822, four vols.). The author's writing, however, was obviously guided by the great French physicist and naturalist, Réaumur, and the following erroneous ideas may, therefore, be regarded as those of the "Pliny of the eighteenth century," who was undoubtedly the best authority of his time on the subject. Speaking of the "numerous retinue" which compose the queen's train, he says these bees "are thought to be males, which serve to impregnate her by turns." How incorrect this theory is all modern bee-keepers know. He is, however, less hard on the drones than recent authorities, such as Maeterlinck, for he merely says "These are . . . . without stings and without industry," and does not—though a close and, to a great extent, accurate observer, as we shall see—saddle them with a long list of evil habits, the existence of which Lieut.-Colonel Walker so zealously—may we say justly?—denies.

That Réaumur was remarkably accurate may be seen from the fact that he held the opinion relative to the monopoly of fertility of the queen, whereas later authorities, as the writer quoted says, "assert that the common bees are parents themselves; that they deposit their eggs in the cells which they have prepared: that the females are impregnated by the males, and bring forth a progeny which is wholly their own." Is it not very probable that this error arose from the observation of what we now know as "fertile workers?"

The error regarding the production of wax obtained as late as the beginning of the nineteenth century. According to Goldsmith, "This substance is gathered from flowers, like honey. It consists of . . . dust or farina . . . and is *moulded into wax* by the little animal at leisure." And again, "The meal of flowers, *of which their wax is formed*, is one of their most favourite repasts."

Propolis, also, is called a "wax," and in respect of this objectionable substance the remarkable opinion that "it has generally an agreeable aromatic odour when it is warmed" will surely find few advocates; and how many are prepared to endorse the statement that "by some it is considered as a most grateful perfume?"

The following curious theory regarding the decrease of cell capacity is entirely new to me, and if it has any foundation in fact (there is no mention of it in any handbooks I have seen) I should be very glad to know if it is an accepted theory at present, and, if not, to what possible source it owes its origin.

"Every worm before it is transformed into an aurelia hangs its old skin on the partitions of its cell; and thus, while it strengthens the wall, diminishes the capacity of its late apartment. The same cell, in a single summer, is often tenanted by three or four worms in succession, and the next season by three or four more. Each worm takes particular care to fortify the panels of its cell by hanging up its spoils there; thus the partitions being lined six or eight deep become at last too narrow for a new brood, and are converted into storehouses for honey."—DENBIGH, *Dublin, January* 28.

SOOT-GATHERING BY BEES.

[4684.] If in human affairs which seem inexplicable there is any value in the maxim, *Cherchez la femme*, there is in bee matters which seem difficult of explanation an equally forcible point to be kept in view, viz., *Cui bono?* Now, I, for, one, cannot believe our intelligent insects would trouble themselves vainly to "beat the air" about the smoke issuing from a chimney. Then I am quite sure that they would no more attempt to substitute the entirely carbonaceous substance, soot, for the nitrogenous pollen of flowers, as food for their larvæ, than a sensible paterfamilias would offer "selected cobbles," or a fine dish of "Derby brights" or "best Wallsend," to his young children as a "nice change" from roast beef and plum-pudding. When such an event happens I shall rub my eyes, and wonder if, after all, friend Loveday's suggestion may not be correct. As to gathering sawdust, there is a little more probability in that, especially if the material is derived from coniferous trees, the resin of which furnishes propolis. There appears much likelihood in Mr. Huby's theory that in certain cases bees become smeared with soot when prospecting in chimneys for snug swarming places. I venture to throw out the inquiry whether "gathering" is a suitable word in connection with sooty bees. Would not "besmeared" or "dirtied" be more correct? Anyway, let us have more observation before rushing to theories.—W. H. H., *Hayes End, February* 4.

THE VALUE OF STRONG COLONIES.

[4685.] Mr. G. M. Doolittle's message to British bee-keepers, mentioned by Mr. Sladen on page 33: "If you tell them nothing else from me, impress on them the importance of having a full force of working bees *at the right time*," deserves to be written in letters of gold, because the success or failure of bee-keeping in a large measure depends on this. But have we in England found out the best way to do this, in the least time, and with the least trouble, and still prevent swarming? I doubt this. Is it *all* a question of management, or is it not also a question of appliances?

Now, how does Mr. Doolittle put into

practice this great secret of success? Our friend, Mr. Sladen, says, when visiting Mr. Doolittle, he noticed all the frames were 11¼ in. deep in the ninety hives there. Now is the great bee-keeper's success *in spite of* or *in consequence of* the use of this deep frame? I am led to ask this because of the editorial answer to C. M. on page 30 :—"Any advocacy of either a larger or a smaller frame than that now in general use must come from other journals than the B.B.J. In other words, we should regard such a change as rank folly, almost approaching to absurdity." Do you not think this is rather too emphatic, seeing how the leading bee-men of the world differ in opinion and practice? In fact, it is not very complimentary to Mr. Doolittle.

But surely this need not be a question of opinion, since the utility of any particular size of frame can be tested by placing various sorts under the same conditions, and offering a prize for the best. Or, seeing that an 8-in. frame is easier of manipulation, have we to sacrifice efficiency for convenience? I should like those who write to let us know what large yields they have; also, let us know what size of hive they use, &c. Is it possible to attain Mr. Doolittle's ideal in a better way than by using the "Wells" hive with a deep frame?—J. D., *Pendle Forest, Lancs., Jan.* 25.

[We hope to refer to the above in "Useful Hints" next week.

DISTRICT B.K. ASSOCIATIONS.

[4686.] As your correspondent Mr. John P. Phillips, who writes on page 35, will be glad to answer any inquiries on the above, I beg to thank him for his encouraging remarks. He tells us that his Association has adopted a system of local secretaries to look after the interest of each district. We trust they will be in reality, and not secretaries in name only. There must be something lacking in *our* local secretary, as I, for one, do not know who or where he is. But as so much of the life of the Association depends upon the local man, I would recommend him, if a B.J. reader, to peruse the letter of your correspondent "B. Mad" (page 35), which was a fitting reply to Mr. Phillips's remarks. If that gentleman can offer (through the local secretaries) the advantages he sets forth on page 35, we will lay the matter before the meeting to be called at an early date. The number of bee-keepers in this district is increasing yearly, but they need something more than "spring and autumn visits" by the experts.

I notice that at the last monthly meeting of the B.B.K.A. a large proportion of replies *re* the "Insurance Scheme" came from bee-keepers not connected with Associations, and I ask: Can Mr. Phillips explain why such a state of things exists? I am afraid I am coming dangerously near the mark, and pause to ask if the W.B.K.A. are working in connection with the B.B.K.A. or the Worcestershire County Council. I hope that if the Bournville District Bee-keepers' Association should become an accomplished fact, bee-keepers will rally round (remembering that "Unity is strength" in everything pertaining to bees) and give it a good start off.—F. TILLEY, *Beech-road, Bournville, January* 30.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

January, 1902.

Rainfall, 1·08 in.
Heaviest fall, ·42 in., on 1st.
Rain fell on 10 days.
Below average, 1·35 in.
Maximum Temperature, 52°, on 1st
Minimum Temperature, 21°, on 15th.
Minimum on Grass, 13°, on 15th.
Frosty Nights, 13.
Sunshine, 59·6 hrs.
Brightest Day, 30th, 7·1 hours.
Sunless Days, 12.
Below average, 9·5 hours.
Mean Maximum, 45·9°.
Mean Minimum, 35·4°.
Mean Temperature, 40·6°.
Above average, 3·9°.
Maximum Barometer, 30·98°, on 15th.
Minimum Barometer, 29·31°, on 25th.

L. B. BIRKETT.

Queries and Replies.

[2789.] *Queen-Rearing: Moving Bees from House Roofs.*—1. Should esteem it a great favour if you will give me the fullest directions for queen-rearing, as I should like to re-queen twelve to fifteen hives. I have Mr. Cowan's "Guide Book" and other works on bees, but don't think the instructions are quite explicit enough to one who has had no experience in this department of apiculture. 2. Perhaps Mr. F. W. L. Sladen would give us Mr. Doolittle's method of queen-rearing? 3. Will you also tell me the best way to remove a colony of bees from between the ceiling and bedroom floor in house into a bar-framed hive, and when would be the best time to do it?—FRED WOODS, *Wisbech, January* 29.

REPLY.—If you will point out what parts of the chapter on "Queen Rearing," as defined in the "Guide Book," are not "explicit enough," we will be very pleased to clear up any uncertainty, if such is found to exist. At the same time, it should be understood that any one who attempts so advanced an operation in bee-keeping as rearing queens by the dozen or more, must have had some previous practice on a small scale. Anyway, we venture to assert that if the chapter in "Guide Book" (page 121) is carefully studied, along with the particulars regarding the "Metamorphosis of Bees" (page 11) no intelligent bee-keeper can go wrong, the words used being as

brief, plain, and simple as can be used to express what is intended. 2. Mr. Doolittle's method of queen-rearing is published in book form, and costs more than the "Guide Book." 3. The flooring-boards would need removal so as to expose the combs, which—when the bees are properly subdued—will have to be cut away one by one and tied into frames if worth saving. It might be well to read the account of moving bees from house roofs in our monthly *B.K. Record* of November last (page 169).

[2790.] *Taking Bees to South Africa: A "Find" of Honey on the March.*—Mr. R. Godson, of Tothill, Hon. Secretary of the Lincs B K.A., has kindly given me your name, as being likely to assist me with advice in the matter of packing bees to take or send to South Africa. My husband is in Pretoria, and I am packing up in order to follow, perhaps in March, and a friend residing near London has given us two frame-hives stocked with bees. The hives are still at East Finchley, and I want to know if it will be too late to move them in March. Also, can you tell me how they should be packed for the voyage, or suggest a practical man who would be able to go to the place where the hives now are, and pack them and convey them to London for me? Would not most of the combs have to be removed altogether, or secured in the frames in some way? I should be much obliged for any information you can give me, also, if possible, the names of shippers who would take bees and understand the care of them on voyage. I think Cape Town would be the best port. It is about three days' journey from Cape Town to Pretoria, and ordinary traffic is fairly started now, so if I wrote my husband (who is a medical man) to have a place ready to receive them, we might be able to get the bees out before swarming time. I am told there are not many bees kept in the country, and they would be profitable to keep. I shall, of course, take out spare hives, &c., and suppose in the first year it will be best to feed them well, and get as many swarms as possible, and thus start a small apiary or bee-garden. The bees in question are said to be of a good strain and very prolific honey-gatherers. Anything you can tell me in connection with them will be appreciated. In 1900, when my husband was on the march with Lord Methuen, he managed to get over 8 or 9 lb. of honey out of an upturned wooden box on a deserted farm. This honey he carried in his tea-kettle and a paraffin-tin found on the place, and that was the only honey they saw any signs of in over 2000 miles trekking. It was, however, very much appreciated by those who got some of it.—E. L., *Hatfield, Doncaster, January* 28.

REPLY.—By a fortunate coincidence, we have an engagement on Thursday (the day this appears in print) with a BEE JOURNAL reader who has kept bees for several years in South Africa, and who, being on a visit to this country, is calling on us for a bee-chat. We will take the opportunity of bringing your query to his notice, and will send you his views of the chance of getting stocks of bees out. Our own opinion is that stocked hives cannot be safely got out, but we will not press the point till we get our friend's views.

[2791.] *Suspected Dysentery.* — To-day (January 20) my bees took a fancy for a flight from their hive, and I was surprised that all of them that took wing, after flying about a few minutes, dropped on the ground and seemed to have no power to rise again. I also noticed that they seemed to part with a substance something like boiled linseed oil. As I have them well wrapped up, I do not care to open the hive and examine the combs this cold weather. The bees seem lively enough just when they issue forth, but in a few minutes they seem to chill and die. I left them all the honey gathered last season for the winter stores, as I value the bees more than the honey, but I am afraid they will dwindle away. 1. When should I expect the colony to be hatching young bees, as ours is a very cold district? 2. What can I do to remedy the mischief? I do not know of any bees but mine being kept in this neighbourhood, and I am very anxious to winter my only stock safely, as I am just getting the bee-fever. Thanking you for such help as you can give me.—H. MILNER, *Eccleshall, Bradford, January* 20.

REPLY.—1. If the stock is very forward young bees may be hatching out in January, and if this is so it is quite possible that such "baby bees" as venture on flight in cold weather might chill and fall to the ground as stated. All the same, we rather think the mischief more probably arises from dysentery, and consequent weakness of adult bees. 2. First ascertain the cause by examining the combs to see if they are fouled by the excreta of bees, and, if so, treat for dysentery. If all is well in the hive interior do nothing, beyond seeing that the bees have food, until later on.

[2792.] *Most Suitable Colour of Paint for Bee-Hives.*—I have been a reader of the BEE JOURNAL now for about eighteen months, and have found a great deal of instruction in it, as I also have from Mr. Cowan's "Guide Book." I commenced with two skeps of bees, and now have eight stocks in frame-hives and one in a skep. Being desirous of giving my frame-hives a couple of coats of paint, I am led to ask:—1. What coloured paint is most suitable for the purpose? I have failed to find anything in the "Guide Book" on this point, and as I make all my own hives, I have need to think about painting them. I need hardly say they are made for the Standard frame, each hive backing. 2. Which is the best way ten frames made to hang, at right angles to the entrance? The stands and floor-boards are attached together, while the hive is loose.

All my eight hives are double-walled at sides, and as I shall be commencing to make some new ones, I will be glad of the reply to question 2.—M. H. Jones, *Adwy, Wrexham.*

Reply.—1. It is generally agreed that light stone-colour is the most suitable for hives; but many bee-keepers adopt striking contrasts in colour for contiguous hives in order to assist young queens in finding their own hives when returning from the "mating trip." 2. Our decided preference is for frames which stand at right angles to entrance, *i.e.*, the top-bars running from front to back.

[2793.] *Ripening Honey: Limiting Drones.*—Will you kindly answer the following questions:—1. I have nine colonies of bees. How many of the whole number would it be advisable to stop from breeding drones? 2. When working for extracted honey, and the super is left on till the combs are sealed over, will the honey be sufficiently ripe to keep if stored away in tins or jars when extracted? 3. If not—and as I have no "honey-ripener"—would the honey ripen if the tops of jars are left open, and how long would it have to stand in order to become thoroughly ripe? 4. Could I get the back numbers of the B.B.J. (through my newsagent) that gives the best method of packing comb and extracted honey for rail, and if so, please state the date of such numbers, and oblige.—J. J. H., *Trindon, February* 1.

Reply.—1. Do not entirely prevent drone-breeding in any hive; it is advantageous to allow a few inches of drone-cells in each colony, but remove all beyond that quantity. 2. If the bee-keeper deals judiciously by not removing surplus honey before it is ripened by the bees, all trouble in the direction mentioned may be avoided. 3. It is good practice to leave the "caps" off jars of honey for a few days after extracting because of its allowing all air-bubbles to rise to the surface and making it easy to skim them off. 4. Information on packing honey for rail appears in the B.J. for December 2, 1897, to be had, post free, for 1½d. in stamps from this office.

Echoes from the Hives.

Chichester, January 27.—I am very pleased to hear the "Echoes" resounding once again. Our old friend John Walton (on page 18) inquires after another old friend in the person of Mr. Alfred Rusbridge, who in years gone by was a frequent contributor to the B.B.J. I am glad to say he is still living, but does little in the way of bee-keeping now, although the district of Sidlesham, near this city, is a regular bees' paradise for hawthorn and clover honey in a favourable season. The crocuses are now coming into bloom here; laurustinus, too, makes one begin to think of spring; but the weather is still very changeable; birds sing one day as in April, and the next it is freezing! For myself, I prefer the cold in January; it keeps the bees indoors and out of harm's way. With the exception of an occasional cleansing flight, I have not seen much of the bees for past fortnight.—J. D.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

*** Owing to press of important matter this week, we are obliged to hold over several articles already in type. Among them "Apicultural Notes," by Allen Sharp; "Taking Bees to the Moors," "Maeterlinck on the Drone," "Buying Bees," and some Queries, along with "Useful Hints."

W. W. Pryor (Breachwood Green).—*Insurance for Bee-keepers.*—Your suggestion that "all bee appliance makers should, in their catalogues, advise customers to support the insurance scheme," must be taken for what it is worth, but we should think it is a matter which must be left entirely to the dealers themselves.

Novice (Throapham).—*Making Bee Candy.*—Sample has not been sufficiently "worked up" by continuous stirring while cooling. The grain is coarse and rough, instead of fine and smooth. We are sending a sample of candy made from same receipt (in "Guide Book") to show you what bee candy should be like.

T. K. (London, S.E.).—*Waterproof Covers for Hive Roofs.*—If the covers (made as sample sent) can be relied on as thoroughly waterproof, we have no doubt they will meet with favour at the hands of readers. The price is in their favour, and if durable, as stated, it should prove a success. We will be glad to have another sample cover in just the form they are to be sent out before giving our final opinion on the subject.

T. P. (West Norwood).—"*Homes of the Honey Bee.*"—We cannot name the dates on which the "Homes" of particular bee-keepers who have been good enough to send photos for publication will appear. After sending a "proof" of each tone-block when engraved, we are compelled to let the pictures take their fortnightly turn in the order received. Yours will appear before long, and when it does a copy of the paper will be sent you to ensure your seeing it.

J. L. Saxby (Clevedon).—*Working for Increase.*—Your second letter repeating queries will be replied to next week.

Editorial, Notices, &c.

DEVON BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual general meeting of the D.B.K.A. was held at Exeter, in the Guildhall, on January 24. Letters of regret from the President, Lord Seaton and others having been read, the chair was taken by Col. Walker, Chairman of the Council.

The report of the Council showed a good general progress, although the present number of members (241) was less by twenty-four than at the last annual meeting. The honey show in August had been a great success, and it was satisfactory that no complaints of any kind had been made by exhibitors or others. There had been one successful candidate for third class experts' certificate. To meet the yearly expenses it had been necessary to draw upon the reserve fund, leaving a small debit against the Association. Full use had been made of the bee-tent at various shows, and lectures had been given in many places.

In moving the adoption of the report and accounts, the Chairman said that the means at the disposal of the Association were not and never could be sufficient for the thorough development of the bee-keeping industry throughout the county. He had never concealed his opinion that no county association could do its proper work without assistance from its County Council. That body had already recognised the importance of the industry by allotting grants to be expended with the assistance of the Association. But, with the consent of the latter, limitations as to the mode of expenditure had been settled on, which had been found in practice to be a bar to satisfactory progress; and a scheme was now under consideration, modelled on one that had proved very satisfactory in another English county, and which he had great hopes would be adopted in Devon. A critical point in the affairs of the Association had been reached. Should the County Council decide that they were able to manage the work independently, there was every prospect of their being left to do so. In that case the current year would be the last year of this Association's existence, and they would retire with every feeling of goodwill, and with such hopes as they could summon up that the County Council might be able to do the bee-industry full justice. The work done would not have been in vain, inasmuch as it had made evident to the Council the importance of the industry, and the necessity of doing something to foster it. Mr Tolson, in seconding, said that if the County Council could see their way to dealing properly with the bee-industry it would be an example throughout the country. To do so singly was a big business, and it must surely be more advantageous and economical to make use of the machinery to their hand in the existing Devon Bee-keepers' Association.

The report was adopted.

The Right Hon. Sir John Kennaway, Bart., M.P., was elected President. Vice-Presidents and Council were elected and re-elected, as were also the Hon. Secretary, Mr. Scholefield, and Hon. Treasurer, Mr. Farrant.

Votes of thanks to the retiring President, the Auditor, and the Mayor of Exeter for use of the Guildhall closed the proceedings.

*** *The Conclusion of Colonel Walker's article on page 53, along with "Useful Hints," are unavoidably held over till next week.*

CAN BEES HEAR?

THE NEW SCENT ORGAN.

By F. W. L. Sladen.

The question, "Can bees hear?" is one in which I have been particularly interested since my discovery that the peculiar membrane which lies between the fifth and sixth dorsal segments of the worker honey-bee, and which has long been known as Nassanoff's organ, is in reality a scent-producing organ, and that the scent emitted by this organ forms an important means of communication between bees during swarming and at other times (see my account in B.J., vol. xxix., pp 142 and 151). It was in asking myself this very question, "Can bees hear?" that I was led to investigate the function of Nassanoff's organ and to make the discovery above alluded to. The ground I took was that I had no evidence to show that either humble-bees or honey-bees can hear ordinary sounds except that furnished by the well known "joyful hum"; and I knew from observation that bees are often attracted in an unmistakable and remarkable way, especially in swarming time, by a group of bees that is giving expression to this so-called "joyful hum"; and not only that, but they commence to give expression to it themselves, and thus a large body of bees may be attracted into the hive or made to go in any direction to which the leaders may call their attention. I asked myself, "Is it really the hum that attracts the bees, or is there any other attractive force associated with the outward indication of humming?" The circumstances seemed to me to be sufficiently suspicious to warrant this question being asked. Not only had my observations gone to show (though by no means conclusively) that bees are deaf to ordinary sounds, but the posture of the attractive humming bees seemed to me to be very remarkable, and to indicate that they were doing something more than merely diffusing sound around them. There were especially two peculiar things about their attitude. One was that the tip of the abdomen was elevated high in the air; the other, which was much more remarkable, was that a narrow white membrane was at the same time invariably exposed between the fifth and sixth dorsal segments, quite close

to the tip of the abdomen. The idea of this being a scent-producing organ at once struck me, and the very humming or fanning seemed to lend support to it, for I asked myself, "Would not the disturbance of the air caused by the vibration of the wings distribute the scent far and wide?" In no way could the bee distribute the scent better than by elevating the portion of its body from which the scent issued, and fanning the scent by a vibration of wings. The more I studied the attitude of one of these "calling" bees, the more convinced I felt that the object of the bee in it was not to give voice to an attractive sound, but to distribute an attractive scent I detected the true scent produced by Nassanoff's organ soon after I suspected it, by putting my nose close down over a swarm of bees entering a hive, but not so that I was certain of it. It was not, in fact, until last March, after I had sent the account of my observations and suspicions to the BRITISH BEE JOURNAL, that I actually proved that the scent I had smelt in the swarm of bees the previous July was really produced by the organ in question. The discovery was made quite unexpectedly by a simple experiment which can be repeated by any one. The dorsal segments of several freshly-killed worker-bees were separated from the abdomens, but not from one another, and were stretched out on cards by means of pins so that the connecting membrane between each segment was fully stretched and exposed to view. A good view was thus obtained of Nassanoff's membrane. I think I was preparing the third or fourth of these specimens when I suddenly smelt the odour that I had noticed in the swarm, but much more pronounced. It came from the specimen I was preparing. I immediately separated Nassanoff's organ with a pair of dissecting-scissors from the rest of the specimen, and placed it on a card by itself. It continued to give off the scent quite strongly for some time, while the card containing the rest of the specimen soon lost it altogether. This is a most interesting experiment, and it can easily be verified. The student must not, however, expect every specimen to produce the scent. Dr. Hunter, of the London Hospital Bacteriological Laboratory, before whom I repeated the experiment, said that he thought the scent was produced only in those specimens which had been torn or injured in such a way as to excite the glands that secrete the scent.

Besides being valuable in swarming-time the scent organ is put to almost daily use during the summer by individual bees who, when they reach the entrance of their hive after having had some difficulty in finding it, almost invariably protrude the organ and set up a humming, and remain thus engaged for some time before they pass in, even though, as is often the case, they may be half paralysed with cold. No doubt such action gives the bee pleasure, and it has rightly been interpreted as an act of joy on reaching home, but it also has the effect of indicating to other tired bees, which may have alighted in the grass or on the ground near by, the position of the entrance, and thus, as I have often seen myself, of arousing them, and they are enabled to reach the shelter of the hive, while if it had not been for the attractive force exerted by their comrades in their pleasure at entering the portal they would certainly have perished from exposure outside.

I do not mean to convey by these notes that I disbelieve that bees can hear. On the contrary, I think it is quite probable that sound as well as scent makes a bee that is performing the "joyful hum" attractive to its neighbours. Still, I now know that the production of scent plays a very important part in an act that was formerly thought to be one of producing sound only, and which was considered to be the chief point of evidence in favour of the supposition that bees can hear. It adds interesting evidence and great weight to the fact long known, that bees have the power not only of perceiving smells, but of distinguishing between them so as to be attracted by some smells and repelled by others.

I am very glad to see the question, "Can bees hear?" raised for discussion in the BEE JOURNAL, and I hope that it may set many bee-keepers to work in what is, in my opinion, one of the most interesting and promising fields for investigation that our pursuit offers. I do not think that any of your correspondents have given evidence to prove that bees can hear. It is quite natural, for instance, that bees should be affected by a peal of thunder which causes vibration, to which it is well known that bees are peculiarly sensitive. It by no means follows that because an insect is capable of producing certain sounds, that it can hear those sounds. If it can hear them, some effect ought to be noticeable. One of the most interesting sounds produced by bees is the piping of queens, and it would assist greatly in answering the question, "Can bees hear?" if some careful observations were made and recorded as to the effect, if any, that follows piping, and also to investigate the real reason for it.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[4687.] During the past fortnight we have been in the grip of winter, frost, snow, cold north winds, and bitterly cold days, alternating with a few hours' sunshine at times. The day

of St. Valentine, when, according to folk-lore, our feathered friends choose their mates, is at hand, "pairing" having already begun here, and my fruit crop will be sadly deficient next summer, for a pair of bullfinches have made sad havoc of the buds on the plum and bush-fruit trees. For past week we have been busy filling orders, and in consequence my usual strolls around the apiary have been missed; but when I got a look round my attention was at once called to the destruction of the buds by the refuse sprinkled over the snow-covered ground. The birds have paid forfeit, but the damage is done. I think the ancient adage—

> Of all the months in the year,
> Curse a fair Februer,

applies with equal force to a fair January. The mildness of January forced on the growth, and consequently the budding birds have started their depredations earlier than usual. This "note" may draw the attention of fruit-growers to the matter so that they may be on the alert for the enemy, not only of the fruiterer but also of the bees, by restricting the breadth of early blossom so useful in building up our stocks for the main harvest in June.

Queen-Breeding by Selection.—It has been my endeavour for many years to breed queens from those mothers whose offspring have shown the greatest number of points of general excellence. Non-swarming has, perhaps, had less attention at my hands than formerly, because I find that by practice the bee-keeper who is continually working among his bees gets but a small percentage of swarms. An occasional colony will, no doubt, swarm themselves out and become useless, but for several years we have not had more swarms than we wanted. The great difficulty to the queen-breeder is the impossibility of controlling the drone. For years past the tendency has been to restrict drone-breeding to as few as possible, and the bees—driven by instinct for the perpetuation of their species—have perforce raised drones in enlarged worker-cells in out of the way places, such as in the extreme corners of the frames, where on chilly nights in July the hatching drones have not been reared in the even temperature required for their full development. The breeder of stock of all kinds is ever selecting the finest male specimen for his purposes, yet bee-keepers generally have done very little in that direction, so far as I can gather from their writings. They are ready to admit the potency of the "sire," therefore ought we not rather to try and improve our stock of drones for the same reason? Probably a large proportion of drones bred under the adverse conditions named above are impotent, and thus our young queens bred with such care from non-swarming mothers may mate with drones from straw skeps in which the swarming strain of bees has been housed successively for generations. Thus, if we admit the stronger influence of the sire on the offspring, our labour is lost so far as non-swarming is concerned. Mr. Rymer (on page 43) thinks our fathers encouraged swarming, which they certainly did, otherwise they had no harvest at taking-up time. *Their* system required swarming. The modern plan does not, where honey is worked for; but I think that under present conditions it will be a very long time before we shall have a fixed strain of non-swarming bees to offer. Regarding my remark some time back *re* tall sections being put on one of my best stocks, my "notes" will bear out what I said on my system of weeding out the poor sealing traits. Years ago I had bees which were not capable of doing first-class sealing work. Possibly the material they were collecting at the time was not of very excellent quality, but I always made a point of re-queening in these cases with either a queen-cell or a young queen from one of my best stocks, and by so doing I believe my stock is improved all round. I have also for years past allowed in my best stocks a good patch of natural drone-cells in one of the central combs, this securing a supply of drones raised under the best conditions, and thus improving my strain both maternally and paternally.

Section Glazing.—I am asked if my offer of a year or two ago to send a glazed section as sample is still open. Yes, my friends; send in your orders in the slack time, and they shall have prompt attention (see advertisement pages).—W. WOODLEY, *Beedon, Newbury.*

APICULTURAL NOTES.

[4688.] *Out-Apiaries.*—In his "Notes by the Way" on page 42 in BEE JOURNAL of Jan. 30, Mr. W. Woodley is good enough to refer to me for information respecting the above. It is now eight years since I established my out-apiary a good many miles from home. The said apiary consists of from thirty to forty stocks managed entirely by myself. I am, therefore, in a position to speak with some authority on the subject. The question, however, is such a vast one that to deal with it adequately in reply to a query would be impossible. Two years ago I had the honour of reading a paper on "The Growth of Bee-keeping" at the annual meeting of the Hunts Bee-keepers' Association, and although I only dealt with the salient points, leaving minor matter untouched, my paper was a somewhat lengthy one. The title of the paper included as a sub-heading, "The Necessity for Out-Apiaries, and How to Manage Them." When time admits I will revise my paper, bring it up to date, and deal with the matter fully in all its bearings. When this is done probably our Editors will publish the same in the B B J.

I will, therefore, not deal with the matter at any length at present. I may, however, state that any one who contemplates establishing

an out-apiary should first become fairly certain that the hives located there would yield at least 40 per cent. more honey than if kept at home; or secondly, that the bee-forage of the locality yields honey of superior quality to that produced at home. Unless one or both those two conditions can be secured the game will not be worth the candle.

Another thing to bear in mind, if the out-apiary is to be a success, is the necessity of being a thorough master of practical apiculture in all its bearings, so that when the out-apiary is visited he may know exactly what to do, and how to do it, in order to be quite sure that his work will be effectual. The out-apiary cannot be visited every day, therefore nothing must be left to chance; in fact, we must be sure that all will go on well, and be perfectly safe until the next visit. An out-apiary is not the place for experimenting; neither should it be undertaken by the inexperienced. Only those possessing a long and varied experience at home should start an out-apiary; otherwise the bee-man will pay dearly for some lessons he will get.

Mr. Woodley says that an out-apiary involves the use of either a swarm-catcher or the employment of some one to watch for and hive swarms. For my own part I neither use the one nor employ the other. I have relied on my own resources during the eight years my apiary has been going, and I only remember having had two swarms. One of these was lost, the other secured. It is, of course, possible that I may have lost swarms by them decamping, but I do not think it probable, for on leaving my out-apiary I generally have a pretty clear idea of the "condition," and if any stocks show indications of swarming, they are the first to be inspected on my next visit. I may add that as most of the stocks are, in the swarming season, on upwards of thirty combs, a swarm from such would leave a void not easily made good in a week. The great things to aim at is avoiding undue interference, while manipulating the whole of the hives in such a manner that swarming is either prevented or reduced to a minimum. How to do that will be explained later on. In conclusion, I need only add that one and the same methods are not always adopted, nor do I lay down any hard and fast rules. I let my eye be my guide, and acquired knowledge the groundwork for my operations.—ALLEN SHARP, *The Apiary, Brampton, Huntingdon, Feb.* 3.

P.S.—I believe I was the first bee-keeper to establish a permanent out-apiary at a long distance from home. Several others have since followed my example.

MAETERLINCK ON THE DRONE.

[4689.] In response to Colonel Walker's invitation to bee-keepers to give their experiences as to the habits of the drone with respect to cleanliness inside the hive, I may say that my own observations entirely correspond with his own as given in his interesting communication to the B. J. (4685).

A few times when depriving the bees I have noticed a little *fresh* excreta spattered over the sections, but so far as I could judge this had been dropped by the workers themselves, and was attributable to the effects of sudden fright caused by the smoke and disturbance incident to deprivation. I should add that excluder-zinc has never been used in my apiary, so that the drones have free access to the supers.

In my opinion, Colonel Walker has done good service in calling attention to what every practical bee-keeper must regard as weak points in Maeterlinck's very striking work on the bee. I should say that the greater portion of his figures are open to criticism, and this is a circumstance the more to be regretted, inasmuch as the work is one that is evidently obtaining a wide general circulation. What, for instance, is to be said of statements that convey such ideas as the following:—1. That the common size of swarms is from 12 lb. to 14 lb. (page 38); 2. That bees on swarming commonly leave behind them a compact mass of honey and pollen reaching about 1 cwt. (page 39); 3. That drones visit and sleep on the nearest flowers (page 287); 4. That the queen bears in her flanks close on two million lives (page 84), &c., &c.? Such statements might be multiplied almost indefinitely, but I think the wildest flight of poetical licence, or whatever it may be, is reached in the following, with which I conclude, although I cannot pretend to be quite certain of the author's precise meaning:—". . . . immense fields of flowers that have been visited daily one or two thousand times" (page 293). Does M. Maeterlinck really mean to saddle our poor little servant with the task of a laborious journey during every half-minute of a long summer's day?—A. ROYDS, JUN., *Soberton, Hants, January* 28.

(*Correspondence continued on page* 66)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

The apiary illustrated on next page is situated on what are known as "The Half-mile Field Allotments," which we take to mean allotments occupied by various holders who fill up their spare hours by gardening. This adds considerably to the interest our readers will feel in the bee-garden shown.

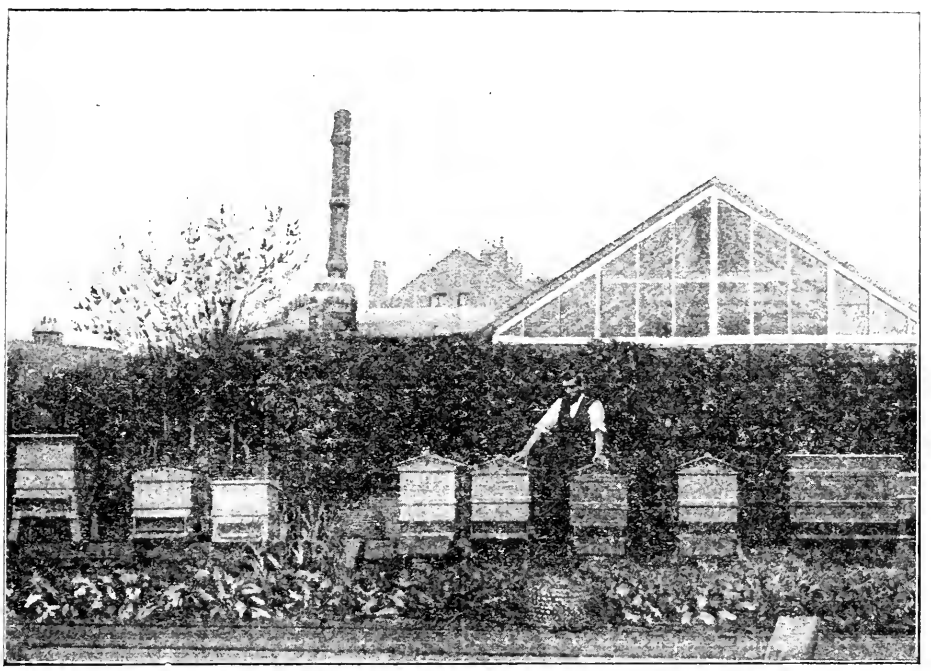
We also learn, through the hon. secretary of the County B.K.A., that Mr. Clarke has been a member of the Bee-keepers' Association since he commenced bee-keeping, and in 1898 he was elected one of our "local correspondents," while this year he was chosen as a member of the executive committee. The hon. secretary also says:—

"He has done much towards creating an interest in bee-keeping by having made for himself an observatory-hive, and exhibiting same at various shows in and around Gates-

head, and has secured several 'firsts' for the same. He is a sincere enthusiast, and I am sorry to say that the ground on which his hives are now seen has been sold for building sites. However, we sincerely hope he may be able to procure another location near at hand."

Writing of himself at our request, Mr. Clarke sends the following notes :—

"In the year 1894, having at the time a small garden about 22 yds. square (one of the Half-mile Field allotment gardens), I had a great desire to keep bees, and after getting from friends such information as I could gain about them I heard of Mr. Cowan's 'Guide Book,' of which I soon purchased a copy. Having read it carefully through, I made two hives from the directions given in the book. These hives when complete I sent away to a friend living about fourteen miles away, and he gave me a swarm of bees in exchange for one of them. When I got the hive and bees I found the inside in an awful mess, the combs all broken down and a lot of the bees smothered. However, I got the kindly help of a fellow bee-keeper, who made the best of a bad job by bandaging up the combs, washing the hive out, &c., so that I was able to get the bees into a fairly good condition for the winter. As it was August when I got them home, I was unable to secure any surplus honey that season. In the following year I put my reading into practice by making an artificial swarm, and the stock also sent out a 'cast,' which latter I returned to the parent hive after cutting out all queen-cells. I may say that I got much other valuable information from the 'Guide Book,' without which I could not have got on. As you will see from the photo, I have now increased my apiary to eight colonies, viz, one 'Wells' hive and seven single ones, all of which are now occupied, the others standing empty ready for use when wanted. The photo shows the hives and a general view of part of the garden, with your humble servant in the background. I have also other photos showing 'A swarm of bees on the beanstalks,' 'Hiving the bees in one side of a "Wells" hive,' 'Showing the queen to my eldest son,' 'Examining the brood-nest,' and also 'The bees at the moors.' I am situated in a very poor district so far as honey is concerned, the gardens being surrounded by houses on all sides, while the nearest bee-forage is Saltwell Park, about a quarter of a mile distant. I am compelled to feed the bees plentifully in the spring-time in order to get them in good condition for the honey season. The clover bloom is ready early in July and lasts about a month. I take the bees to the moors early in August, and have to hire a horse and cart for the twenty-five-mile journey. As the moors are so far away, the expenses are heavy, so it needs a fairly good heather harvest to pay my expenses and



MR. WM. CLARKE'S APIARY, GATESHEAD-ON TYNE, NORTHUMBERLAND.

leave a small balance over. Needless to say, I look forward with much pleasure to my annual trip to and from the moors. I generally leave home about 8 p.m., and usually arrive at my destination at 2 or 3 o'clock next morning, the bees remaining at the heather for about six weeks. I have had good and bad seasons, but have no difficulty in finding a ready sale for the honey, getting 8d. per 1-lb. section for the clover and 1s. per lb. for the heather, wholesale, which I consider fairly good—'could easily sell double the quantity.' I make nearly all my own appliances, which enables me to keep expenses down. I conclude by wishing for all bee-keepers a good season during the year 1902."

CORRESPONDENCE.

(*Continued from page* 64.)

QUEEN-BREEDING BY SELECTION.

[4690.] I have read again and again Mr. Rymer's contribution on the above subject on p. 42, and, while I agree that "we should endeavour to perpetuate the distinguishing characteristics of desirable stocks" (Cowan), I am not fully persuaded that it is a desirable thing to try to eliminate the swarming impulse altogether. There is, as every bee-man knows, a close connection between fecundity and swarming. The "principal failing" of Carniolans, says Mr. Cowan, "is a propensity for excessive swarming, *the queens being exceedingly prolific.*" If it were possible to get rid of the swarming instinct altogether by selection in breeding, I fear it would only be at the cost of prolificness. So long as a queen does her duty in laying a full number of eggs, the natural result, in due time, will be (unless proper steps are taken by the bee-man) an overcrowded hive, followed by an impulse to swarm on the part of the worker bees, for, according to Maeterlinck, "Life of the Bee," p. 43, "all things go to prove that it is *not the queen*, but the spirit of the hive that decides on the swarm." For "spirit of the hive" in the above quotation I prefer to read "the natural instinct implanted by the Creator."

The attempt of the queen to frustrate the workers' object by striving to destroy the cells containing embryo rivals would seem to show that she herself has no desire for swarming so long as her position is secure, and that when she does at length leave the hive it is in obedience to a stronger will than her own. As this indicates that the progeny have *by nature* a disposition which the mother does not possess, it is not clear to me how, by carefully selecting the mother, the disposition can be eradicated. Perhaps some of our older "hands" will throw a little light upon the matter.

I do not agree with Mr. Rymer as to Mr. Cowan's chapter on "Queen-rearing," at any rate, so far as *eliminating swarming* goes. Any one not acquainted with the "Guide Book" would think, from Mr. Rymer's article, that Mr. Cowan had dealt with the subject, and shown "that in the hands of our best bee-keepers this very thing has already been accomplished," when as a matter of fact he never mentions the subject in the chapter. Mr. Cowan does, however, speak of the "disposition to swarm" being "moderated, or even entirely prevented," even in the case of those excessive swarmers, the Carniolans, but the remedy is not in queen-selection. On the contrary, it is "by giving them plenty of room and ventilation." And here I beg to call Mr. Rymer as a witness to the complete efficacy of this remedy in efficient hands. By his system of management he says (p 419, vol. xxviii.) he has "*totally overcome swarming*, and greatly increased" his amount of surplus. Now this witness seems to me to flatly contradict what he says on p. 43 this year, where he observes, "It is well known that swarming is hereditary, and far more pronounced in some species than others; therefore *if we wish to reduce swarming*" (the italics are mine) "we must eliminate this trait by breeding, &c."

My idea is, breed from your most prolific queens, and control their progeny by timely and judicious management. I only had one hive that swarmed last season, and that I "forced" by limiting *their* space when providing ample room on the other hives. The "W. B. C." hive is a valuable auxiliary in moderating the swarming impulse, on account of the ease with which it can be ventilated and kept cool.—W. HEAD, *Brilley Vicarage, Whitney-on-Wye, Herefordshire.*

TAKING BEES TO THE MOORS.

[4691.] In reply to Mr. Reid (4656, p. 34) and all bee-keepers who take bees to moors, I will give my method of closing entrances, which is very simple and effectual. It does away with tacks, which to my mind aggravate the bees, especially when being drawn out of a hive that has had several coatings of paint. My first journey to the moors was with a neighbour, whose hives were closed up with zinc and tacks, and I can only say if we had not been well protected with veils, gloves, smoker, &c., like Mr. Reid, we should have had a warm time of it. I remarked then if ever I started bee-keeping I would try to devise something more effectual. The spring following (1900) I began by getting three stocks of bees and Cowan's "Guide Book," then in 1901, I commenced taking the BEE JOURNAL, both of which I find very helpful, and, being determined to carry out my object properly, I adopted the following method which, as stated above, answered the purpose in every way:—I first got a piece of wood 4 in. or 5 in. longer than entrance, same thickness as plinth of slide, and same depth as the slides; plane it to slip in and out easy; cut a piece out of the bottom ½ in. deep same length as entrance. Over this put per-

forated zinc. Cut the zinc 1 in. deep and allow 1 in to lay over each end of holes; cut out and fix on slide (level with the bottom) with thin strip of wood ½ in. deep, level with top of holes; three or four small nails will secure them together, and the slide is complete. I then draw out one entrance-slide, and, by pushing the perforated slide in, push the other entrance-slide out, and all is secure. I can fix this ready when bees are flying, an hour or two before I finally close them up, which is a great saving in time, and no danger of escape.—D. RAISBECK, *Baldersby, N. Yorkshire, February* 3.

INSURANCE FOR BEE-KEEPERS.

HOW IT WORKS IN GERMANY.

[4692.] I follow with much interest the correspondence in your pages on the question of insurance for bee-keepers, and from your editorial footnote on page 41 I suppose the scheme is likely to soon materialise.

In this vicinity, I may say, bee-keepers are insured with the Zürich Insurance Company (premium, ½d.). Some of the papers advocate a plan like that of the B.B.K.A., but we in Germany are blessed with small local clubs established in various parts of the country, and these are united to provincial organisations. Of these latter we also have a great many, but, unfortunately, these are not united to a national organisation. We have also by far too many papers devoted to bee-culture; consequently, they are not supported as they should be. Our strength is too much divided; concerted action not to be expected. If I am right in my supposition that you have county associations all over the country, and these are united to the central body known as the British Bee-keepers' Association, you are in a position to guard and promote the interests of bee-keepers more effectually than we can. With proper support, the insurance scheme is bound to be successful.

By making the premium low (a halfpenny per hive would surely be ample), and paying perhaps a couple of pennies for the receipt in addition to the premium per colony, you ought not to lack patronage. I should consider it a serious impediment to success to pay a stated amount up to a certain number of stocks. If the insurance scheme is carried out it will strengthen the B.B.K.A. and bring it many new members. If you have a large membership you can surely secure, if it seems advisable, an Act of Parliament to enable you to combat foul brood more effectually, and that the Government would establish and maintain an inspector, &c. You might even have an insurance against damages from foul brood, so that at least expert help could be had free, and perhaps half of the actual value of stocks that would have to be destroyed might be paid. Such things are possible only with a national organisation, but where there are scores of independent organisations there are usually at least half the number of different opinions, besides other impediments.

The risks of the insurance are so small that even with a halfpenny premium you will in a few years have a reserve fund. I know of a beehouse containing twenty colonies situated in the corner of a cross-road, and the flight of the bees is direct over the road. A wooden fence about 7 ft. high protects passers-by and also horses in vehicles. Such a protection would need to be provided by any one whose stocks are near a road before he could insure. Early spring count as a basis, I believe, would give satisfaction. I hope you will soon have a flourishing insurance fund connected with the B.B.K.A.—J. A. HEBERLY, *Stortten, Bavaria, February* 7.

THE INSURANCE SCHEME.

[4693.] I am a reader of your journal, and my father and myself are bee-keepers. We should therefore like to join in the insurance scheme of the B.B.K.A. If you send us two policies we will fill up and forward subscription when Council of British Bee-keepers' Association scheme is brought out.—WM. WOOD, *Brownhills, Walsall, February* 10.

[Communications regarding the above must be sent to Mr. E. H. Young, Sec. B.B.K.A., 12, Hanover-square, London.—EDS.]

PACKING BEES FOR SOUTH AFRICA.

[4694] In reply to the query of "S. L., Hatfield" (2790, page 59), in BEE JOURNAL of February 6, may I be allowed room to say I have had some experience in packing bees for South Africa, and, after trying several different methods, have found nothing better than a specially-constructed travelling-crate, with a proper system of ventilation, which can be increased when warmer latitudes are reached. These crates have a simple arrangement whereby the frames are so securely held in position that no movement can be caused by the rolling of the vessel. A few weeks ago I received a letter from Mr. G. H. Stanley, of Durban (a correspondent of the BEE JOURNAL, I believe) to say that "bees sent by me had arrived safely after thirty days from London to Natal." The bees in question were packed in crates as above described.

If a passenger can take bees out with him and keep the hives in their berth, and by so doing give them personal attention, so much the better. On the other hand, to send bees (however well and carefully packed) in their hives, is almost sure to end in disappointment. —E. H. TAYLOR, *Welwyn, Herts, February* 6.

[4695] Seeing that a lady correspondent (Query 2790, page 59) has written you about two stocks of bees she wishes to take to South Africa, I write to say that I feel confident that I could pack them in such a manner that they

would arrive at destination safely, and would neither be suffocated nor crushed. I would give the bees free access to the alighting-board without losing a bee, and there would be little or no trouble on arrival. If my services are availed of I shall be pleased to interview the lady, being able to pack the bees and safely ship them.—P. J. NORRIS, *Aldenham Park, Elstree, February 9.*

[We will see that both the above communications are brought to the notice of our lady correspondent, who will no doubt require some guarantee of the ability of the person willing to undertake the "packing" referred to. We say this because it is only those who have had some experience of the task who can know what are the difficulties to be overcome.—EDS.]

BUYING BEES.

[4696.] I am constantly seeing in the B.B.J. accounts of mice being found in hives, to the following story (which is strictly true) as a variation may possibly interest and amuse some of your readers. Early in May, 1900, a well-known bee-keeper in this locality lost a very fine swarm (his first), and the same day one equally good was hived in a skep by a neighbouring farmer. The rightful ownership was pretty clearly demonstrated to him, but Hodge declined to part, and seemed mighty proud of his prize. However, not having made much headway with the bees, and hearing that spring was the "best time to sell," he made up his mind early last year to turn his stock of bees into cash, so asked the same bee-keeper who had claimed the swarm if he would buy the stock of bees in question, stating that they were "a rare strong lot!" and he had seen them going in and out of the hive in great numbers. He also endeavoured to get an idea as to value. My friend declined to trade, but sent him to another man who was wanting a stock of bees. Eventually these two came to terms, with the result that in a few days the would-be purchaser drove over fully equipped for the job. Upon going to the hive, however, to take possession, not a bee was to be seen, and on raising the skep (to use the farmer's own words) out jumped a "bloomin' big rat," and he (the farmer) was at once cured of the bee-fever.—C. H. TOMLINSON.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Praktischer Wegweiser für Bienenzüchter (Germany).—The examination of the diseases of bees will be taken up by the biological faculty of the health department, in the bacteriological laboratory. A small apiary will be arranged with room for the hives. This is expected to cost 1,500 m. (£75).

The same.—It is little known that the frog is a dangerous enemy to bees. A bee-keeper who, having no room for his bees, kept them in a neighbour's garden, complained to a friend of the constant dwindling of his hives. After careful observation, the riddle was solved. Near where the hives were placed a large ditch ran through the garden, and this abounded in frogs, green and brown. Frogs equally carry on a war of extermination against the bees. They wait like a beast of prey until a bee is near enough, and then with a sudden dart seize and devour it, regardless of the sting. In the stomach of one frog were found no fewer than eleven bees.

Rucher Belge (Belgium).—Digestive lozenges can be made by melting in a Bain Marie 3 oz. of pure gelatine in 3 oz. of water. Then add carefully, and stirring thoroughly, ½ lb. of honey, previously warmed. When well mixed, add a little cochineal and five or six drops of English essence of peppermint. This is then run into lozenge moulds or spread thinly on a plate, dried in a cool place, cut into shape, and finished drying for eight hours in the shade in a dry place. A healing balsam, really valuable in case of hurts, wounds, or grazes of the skin, is prepared in the same way in a bain Marie: Wax from the cell-cappings, 1 part; 2 parts of fresh propolis; and 7 parts of the best honey. After well mixing, pass through a close cloth and press out well. Replace in the Bain Marie. Add cochineal and a few drops of essence of lavender. Then beat up the mixture well with a fork and fill into small pots. Fasten down closely.

Praktischer Wegweiser.—In France honey is very low in price, as low as 5d. per lb., and in America beekeepers sell honey cheaply. The industry flourishes, although 4d. per lb. is a fair price. A writer to the *Apiculteur* proposes that honey shall be sold at so low a price as to drive all other sweets out of the field, and thus take its due place of superiority.

From the same.—Cakes of sugar which can be laid on the frames are much to be recommended for winter feeding. Placed under the coverings, it will absorb some of the winter moisture of the hive. The bees eat the sugar more eagerly than the honey, which they require for the nourishment of the young brood. The beekeeper can easily feel with his hand if the cake is still there, or if another is wanted.

Bulletin de la Société d'Apiculture de la Somme.—History of a cask of hydromel.—On May 6, 1893, a cask of "dry" mead was made, and after six weeks of rapid fermentation was bunged down and left to take care of itself. In December, 1893, it was tasted, and, to our great surprise, it revealed a flavour of liquid farmyard manure. Once more left to itself, in July, 1894, it was tasted by connoisseurs, and judged to have become honey

vinegar. A third time left alone until December, 1895, when, in despair, it was drawn off, clarified, and bottled, and left in the cellar. After five years and a half it is now almost delicious.

Praktischer Wegweiser.—Moistening the press for the making of comb-foundation. The lower plate of the press should be damped with brandy, the upper one with a mixture of honey, water, and brandy. This is an excellent means of loosening the sheets of comb. The wax must be quite pure; the best comes from the solar wax-melter, where it has to be run through a linen bag. The purer the wax the less the foundation will stretch, and the easier it is to separate it from the press.

Bulletin de la Société d'Apiculture de la Somme.—Receipt for making honey soap:—5 oz. best yellow soap, 5 oz. honey, 1 oz. benzoin, and ½ oz. of borax. Mix well in a mortar, then melt in a bain Marie. Strain and run into moulds. These can be made of cards, cut and fitted to a suitable shape.

Deutsche Illustrierte Bienenzeitung from the *Bienenvater aus Böhmen.*—The two daughters of a Swedish clergyman sent a honey cake to an agricultural show, in hopes of gaining a prize with which to purchase a Christmas gift for their father. The family was seated at dinner when a large sealed paper was brought in from the post, the contents of which ran thus: "The judges of the 7th class (stables and building-material for the same) have awarded to Miss Minny and Miss Betty Hansen a gold medal for their specimen of Tiling for the floors of stables and dairies. Although the composition of the mass is not stated, the judges feel called upon to reward this excellent production, as even unshod horses could not injure a stable floor composed of tiles made of this composition."

From the same.—Swallows and the so-called bee-catchers are maligned as among the bees' worst enemies. For a long time the latter were carefully watched by an observant bee-keeper, and if seen to catch any prey near the hives, were shot and examined. Two of these birds had drones in their crops, and the others (perhaps a dozen birds in all) had, besides a beetle, large flies, striped black and yellow, such as are often seen near the hives. No sign of a bee in one of them. Only once, after days of cold, rainy weather, when food was hard to find, a bird, hardly pressed by the needs of her little ones, seized upon a bee, and after carefully taking out the sting and dividing the insect, she fed the young ones with it. These birds are wonderfully useful in destroying insects, and the charge of bee-eating is quite unfounded.

The same.—The following incident proves the value of honey in the treatment of domestic animals. The writer had a valuable milch cow, which, immediately after calving, became difficult to milk, and the veterinary surgeon performed a slight operation. She, however, became worse; hard swellings formed in the udder, and the milk fell off from five gallons daily to less than one. Everything was tried, but without success. As a last resource the honey-cure was attempted, the udder being well and carefully rubbed with honey three times a day. There was soon a marked improvement; the swellings became softer, and after about ten days disappeared entirely, and the yield of milk returned to about four gallons daily. The case speaks for itself.

Leipziger Bienenzeitung.—A very interesting experiment lately carried out proves a power of recollection in bees. A number of paper flowers of all colours were sprinkled with honey, and hung near a row of dahlias, which the bees were working. They took no notice whatever of the paper flowers until one was held so close to a bee that she smelt the honey, and went to work to collect it. This bee and a few others which had worked the paper flowers were marked with red colour and returned to their hives; the paper flowers were removed. Some little time afterwards strips of the same coloured paper were hung about the garden, when the marked bees were seen examining them closely seeking for honey. It is evident they had some recollection of honey associated with the various colours.

Queries and Replies.

[2794.] *Varieties of Heather Honey in Germany.*—I would be pleased if you would answer following in BEE JOURNAL:—1. Is heather honey considered finer than that from clover, sainfoin, or lime trees? 2. What is the botanical name of the heather, and where does it grow most abundantly? Does it grow on moorland or on sandy land? 3. I have seen white Dutch clover spoken of in connection with the rotation of crops; is it sown as a forage plant? What is its botanical name? 4. Can heather honey be extracted?

From the excellent article of "D. M. M." I infer that the heather he speaks of might be the *Erica vulgaris*, as it grows especially abundant in the Lüneburger Heide, Hanover, which begins to bloom about August 1. Some one mentions that he sells the heather honey higher than that from clover, and I was not aware that the honey from the *Erica vulgaris* was especially fine, but that the *Erica cinerea*, blooming very early in spring (as soon as the snow disappears), yielded very fine honey.

The honey from the *Erica vulgaris*, as we have it in Germany, could not be extracted, but recently it is claimed that a Mr. R. Dathe had succeeded in extracting the honey from the *Erica vulgaris*. Thanking you in advance for your kindness.—J. A. HEBERLY, *Stortten, Bavaria, February 7.*

REPLY.—1. Heather honey—as known in

this country—is so distinct in aroma, flavour, colour, and consistency from all other honeys gathered here that it cannot be judged alongside any of those you name. So generally is this recognised that at all our shows heather honey has separate classes for itself. 2. The respective varieties of British heaths are *Erica*, or *Calluna*, *vulgaris* (ling), *Erica cinerea* (bell heather), and *Erica tetralix*. The latter grows only on damp bog-land, and is useless for bee-forage. 3. White or Dutch clover (*Trifolium repens*) is regarded here, as in most countries, as the chief of all bee-plants. The seed is sown in spring mixed along with that of ryegrass and other seeds for hay and forage. 4. Not in the ordinary cylinder extractor. It needs a special press for forcing the honey from the combs.

[2795.] *Transferring Bees to Frame-Hives. —Glass Quilts.*—1. Kindly state what you think would be the best method of proceeding in the month of April with a skep under the following conditions:—I brought the bees from the south in skep; it was packed in a frame, as recommended by Mr. Cowan (in fact, an improvement, having a broad bottom so as to stand firm), but I found that through being put in a warm porter's room all the combs were broken off; so after putting in pieces of cork attached to bits of divider wood, I put it down inside an Abbott's combination hive. I much regret not having put it on frames of comb, but all I had were very old. 2. Also kindly give particulars of glass quilts. After having been a successful bee-keeper with fifteen hives, making money out of it, I have for about seven years had nothing but an empty bar-frame hive. 3. Can you tell me if the Willesden paper is still to be had and where, and would it not be good to cover cheap hives? I was once a constant subscriber to the JOURNAL, and hope to be so again. I have read Dzierzon, Langstroth, Cook, Cowan, and Simmins.—F. ECCLES, *Milnthorpe, Wakefield, February* 3.

REPLY.—1. After examining the rough sketches sent we advise your setting the skep —with combs as fixed on a wood skewer— above the top-bars of a frame-hive, and allowing the bees, as they require room, to work down into the latter. Of course, the frames will need fitting with full sheets of comb foundation, as directed in "Guide Book." 2. Glass quilts (so called) are simply sheets of strong glass laid next the top-bars of frames for observation purposes. They need a circular feed-hole cut by a glazier. 3. The Willesden Paper Company, London, supply it, but we prefer other materials for the purpose named.

Echoes from the Hives.

Margoville Apiary, Lanarkshire, February 8.—Yesterday, although the air was somewhat keen, the sun shone brightly all day, and by mid-day the apiary was alive with bees taking their first cleansing flight. After three months' enforced confinement they took full advantage of their opportunity (and when do bees neglect an opportunity?), and the bee-keeper following their example had all quilts, packing, &c, exposed to the sweetening effects of the warm sun. To-day, 5 in. of snow covers the ground, but my mind is easy. The bees have food enough and are snug enough. So far all is well.—G. H.

Wooler, Northumberland, February 4.—The snow has disappeared once more, and I find that most of the hives are in good condition, both with regard to quantity of bees and stores.—JAS. WADDELL.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

AMATEUR (Penryn, Cornwall).—*Copper Bee-smokers.* — There is no reason to suppose that any harm will follow the use of your "nicely finished" copper bee-smoker. In fact, most bee-men will probably rather envy you its possession. We never heard of "bee-smokers" made of "aluminium," or even of brass, as stated.

A. GORDON (Huntly, N.B.).—*Transferring from Skeps to Frame-hives.*—To place a skep of bees above the top-bars of a frame-hive in the month of January will only have the effect of delaying the bees of skep from transferring the brood-nest to the hive below. We should at once replace the skep on its own floor-board, and defer any further operations until the bees are getting strong in numbers in spring. It will obviously delay this desirable condition to compel the bees to travel through an empty frame-hive in working, besides reducing the warmth which assists them in building up early in spring.

J. P. DENCH (St. Austell).—*Insurance for Bee-keepers.*— The full particulars of the insurance scheme will be duly printed in our pages when ready for publication. The matter is being dealt with by the B.B.K.A. Council, and no time will be lost in making all who are interested fully acquainted with the details.

ERRATUM.—On page 55, first column, second line above case *C.*, for "foul" stage, read "spore" stage.

Editorial, Notices, &c.

USEFUL HINTS.

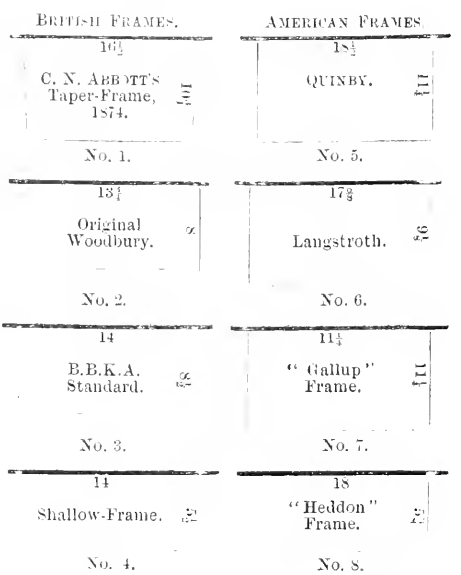
WEATHER.—Up to about a fortnight ago the weather this winter, from the bee-keeper's point of view, had been in no sense "wintry," but as we write the whole kingdom is frost-bound, after severe snowstorms, and our morning papers come out with special articles headed "The Severe Frost."

In the reliable Weather Report of the *Standard* we read of a temperature as low as 14 deg. Fahr. in Leicestershire, and other low temperatures of 18 deg. in London, 19 deg. at Oxford, and 24 deg. at Liverpool, Shields, and Dungeness. The report then goes on to say:—

At Greenwich the thermometer in the screen registered 14.3 deg. during Saturday night, and the lowest temperature during Sunday night was 20.1 deg. The thermometer in the sun's rays at Greenwich on Sunday rose to 80.3 deg., which is 73.4 deg. warmer than the temperature, 6 9 deg., registered by the exposed thermometer on the grass in the early morning. In the East of England the thermometer only rose 2 or 3 deg. above the freezing point. In Ireland the weather continued much warmer than at the close of last week. At several places the thermometer during Sunday night did not fall below 40 deg., and yesterday the readings rose to 50 deg. and above. The barometer was rising in most places last evening, and the frost seems likely to continue for the present over England.

THE STANDARD FRAME.—As time rolls on we seem to have at intervals of from three to five years a uniform and regular recrudescence of the complaint against the size of the B.B.K.A. "Standard" frame. It has been declared by some to be too small, and by others too large—which should be some testimony to the value of a frame that comes midway between the extremes; but be this as it may, it is certain that as a rule the complaints come from earnest, and no doubt well-meaning, beginners in the craft, anxious to "go one better" than the older hands. It is, however, a curious but certain fact that the great majority of us "old hands" had the very same ideas ourselves at some period during our novitiate days. We can speak for one, anyway; our "fault," however, was with the original Woodbury frame —which most nearly resembles the present B.B.K.A. "Standard" frame.

But when we come to facts as they face us to-day, we affirm that none of our recent correspondents who write on page 30 (January 16), page 37 (January 23), or page 57 (February 6) can point out instances of heavier weights of surplus honey gathered in this kingdom



(from hives fitted with frames larger or smaller than the "Standard") than the well-authenticated yields secured by the use of the B.B.K.A. "Standard" frame, which yields have been duly recorded in our pages. Until this is done it would, as we have said over and over again, be sheer folly to ignore the enormous advantage of a uniform-sized frame for use in the whole kingdom.

Having said this much, we repeat our declaration that this journal, while offering no objection whatever to every man using his own discretion in choosing a frame for use in his own apiary, claims the privilege of recommending young hands at bee-craft to begin where we left off. To do otherwise is a retrograde step we cannot consistently encourage.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of January, 1902, was £724.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

CHESHIRE B.K. ASSOCIATION.

ANNUAL MEETING.

The annual meeting of this Association was held in Chester on Saturday, February 8. There was a moderate attendance of members, which would, no doubt, have been better had not the weather been most unpropitious. The Duke of Westminster was re-elected President. Vice-Presidents also were appointed, and the following members will form the Committee for 1902: the Revs. J. F. Buckler, T. J. Evans, and E. A. Hutten, Messrs. J. A. Bally, H. Bell, W. Bradburn, E. B. Hinde, G. Lambert, P. H. Rawson, F. Lynch, W. H. Forde, J. Lyon Denson, H. Potts, and F. Hewitt. Mr. T. D. Schofield was re-elected Treasurer; Rev. E. Charley, Secretary; Mr. F. H. Taylor, Librarian, and Mr. J. Tonge, Auditor.

It was resolved that the services of a paid assistant secretary should be obtained, and at a subsequent meeting of the Committee Mr. A. P. Smith, Grosvenor-chambers, Newgate-street, Chester, was selected from a number of applicants. At a later hour an address was given by Mr. Robert Newstead, A.L.S., Curator of Chester Museum, to a somewhat limited audience on "The Classification and Anatomy of the Honey Bee."

The Report for 1901 showed that the Association continued to make progress. There was an increase of fifteen in membership, and the balance in the bank was larger than at the end of 1899. The services of the Association's Expert, Mr. J. Gray, had been supplemented by Messrs. E. Venables and H. Edwards, so that all the members had received an Expert's visit early in the season. Eleven lectures and bee-demonstrations had been given in the county under the auspices of the Technical Committee of the Cheshire County Council, and a very successful show was held at Chester on August 28 in conjunction with the Cheshire Agricultural Society. Possibly the most important statement in the Report is contained in the following extract:—"Foul brood:—It is satisfactory to observe that there is a further decrease in the number of apiaries which have been reported by the Experts as being affected with disease, although the area covered by the Experts' work was somewhat enlarged in 1901. Apiaries and stocks affected with foul brood: 1899, 46, 118; 1900, 40, 74; 1901, 32, 51."

The total number of bee-keepers visited by the Experts was 359, whose stocks amounted to 1,344, 103 being in skeps.—E. Charley, Hon. Sec. C.B.K.A., *February* 12.

HEREFORDSHIRE B.K.A.

ANNUAL MEETING.

The annual general meeting of this Association was held at Clarence House, West-street, Hereford, on Wednesday, February 12. Sir James Rankin, M.P., presided, and among those present were Captain Verschoyle, Messrs. J. Helme, J. G. Godwin, P. MacCabe, Alfred Watkins, M. Meadham, J. H Wootton, C. Edwards, S. Williams, &c.

The Hon. Secretary, Mr. J. G. Godwin, presented his report, which, after giving an account of members visited and stocks examined, went on to say:—At the honey fair held in September there were fifty exhibits, the competition being very keen, and the honey (with one or two exceptions) was of high class. Sales were very satisfactory. The season's take of honey had been above the average, both in quantity and quality. The Secretary regretted to report that the financial position was disquieting. Although the balance-sheet showed a small sum in hand, it did not represent their true position, as they had liabilities to the extent of nearly £9. The membership had also decreased by twenty-five or so less than last year, the number now being 100.

Mr. Watkins proposed the adoption of the report and balance-sheet, and the Chairman, in seconding, said he regarded bee-keeping as a most useful culture, for the promotion of which he did all he could. He regretted the withdrawal of the grant from the County Council, but the Technical Instruction Committee were desirous of giving the grant if they could, but the finances were very limited. It was therefore decided to withdraw the grant for a time, but he hoped that it would be renewed ere long. He was voicing, he thought, the sentiments of the Committee when he said they greatly valued the good work of the bee-keepers' associations. He should like the society to tabulate statistics as to bee-culture in the county, because it would be satisfactory to know if such culture were increasing or decreasing. He was sorry there was a falling-off in the membership, because bee-keeping meant a great addition to the income of the working man. He hoped every effort would be made to get new subscribers in 1902.

The resolution was carried.

Sir James Rankin was re-elected president, and the following ladies and gentlemen were appointed vice-presidents: Mrs. Glinn, Mrs. Bull, Sir Joseph Verdin, Captain Freke Lewis, and Mr. H. C. Moffatt. The executive committee of eleven comprised the following: Mrs. Glinn, the Rev. W. H. Head, Messrs. C. Edwards, A. Hill, W. Tomkins, Alfred Watkins, J. Helme, M. Meadham, and the local secretaries. Mr. J. G. Godwin was re-appointed hon. secretary and treasurer, and Mr. Joseph Thomas auditor.

Mr. Godwin (hon. secretary) then introduced the subject of insurance for beekepers, and said he did not know whether the British Bee-keepers' insurance scheme would be taken up much in this county. The idea, he understood, was to cover loss which persons sustained through bees stinging horses or cattle and causing injury or death. In various parts

of the country, at intervals, accidents have occurred; in one instance, some years ago, a horse died through being stung by bees, and a considerable sum in damages had to be paid. The insurance societies would take the risk at a penny per hive per annum, provided sufficient bee-keepers joined to justify their taking such a step.

The Chairman thought that accidents of the kind referred to were a remote contingency.

The meeting passed no resolution on the matter, and a vote of thanks to the Chairman terminated the proceedings.—(*Communicated.*)

HENBURY AND DISTRICT B.K.A.

ANNUAL MEETING.

The annual general meeting of the above Association was held in the Boys' School-room, Henbury, on Wednesday, February 12. The Treasurer's accounts for the past year showed a good balance in hand.

Major-General Sampson-Way, C.B., was re-elected President, Arthur Baker, Esq., Vice-President, W. G. Barnfields, Hon. Secretary and Treasurer.

Committee:—Herbert F. Jolly, Esq., Chairman, J. A. Waller, Esq., Professor A. F. Stanley-Kent, M.A., Messrs. Rugman, W. Board, J. Fenner, W. Orchard.

Ten members, with a maximum of 105 hives, expressed their readiness to participate in the insurance scheme. I believe, when full particulars of the scheme can be explained to all my members, many more will join. I am pleased to state that during the past year we have not had a case of foul brood in our district. The honey season a good one, and no trace of honey dew.—W. G. BARNFIELD, Hon. Secretary and Treasurer, *Charlton, nr. Bristol.*

AN OBSERVATORY HIVE.*

MY THIRD SEASON'S "OBSERVATIONS."

By Col. H. J. O. Walker.

(*Concluded from p.* 53)

Huber, from whom many writers since his day have taken their facts, has described the anxiety shown by young queens, for the moment single in a hive, to destroy the queen-cells that contain possible rivals. Other observers have told a different story; it is evidently a point on which bees vary; I saw nothing of the kind. Some of the young queens that were loose showed an interest in the queen-cells, but they did not attempt to injure them. One especially often climbed upon them, the workers who were guarding the cell making no attempt to prevent her. These guards remain on watch for long periods, and are fed by other workers while on the post.

Besides the swarming recorded, there were attempts to swarm, the queens in some instances being unwilling. There seems no doubt that they have to be hustled out by the bees. In one case I saw a queen being hauled along by the leg, and another queen "piped" as she was being swept through the passage way. The queens once out and the swarm started, many of the workers would hurry back into the hive in what seemed to my fancy a shame-faced manner, having achieved their object. The too numerous drones helped to get up the excitement and generally hurried back again. I was disposed to be annoyed with them for this, but on second thoughts their remissness seemed sensible enough. Drones must be kept well fed, and the vague chances of a swarm would not at all suit them. Their work is better done by staying where food is stored, and, realising this, drones will shift their abode in numbers to hives where they may be wanted, but only a few of the more adventurous accompany swarms; and the others, the stay-at-homes, may it not be that instinct bids them stay and lend their welcome warmth to a hive depopulated?

The queen who, surviving the stress of natural selection, remained on July 17 to be the mistress of the hive, owed her success in some degree to an ingenious stratagem. After the fashion of an old sea-captain, whose wont it was to "turn in" when the stormy winds did blow, with strict injunctions that he was on no account to be disturbed till the weather moderated, this wise princess secreted herself in a deep and empty cell; where, sheltered all but the end of her abdomen from a troubled world, she would remain for more than an hour at a time. The habit is worth noting. It was my lot about that time to hunt up virgin queens in a swarmed hive. There were three, and one of them would certainly have escaped notice had not my now experienced eye fallen on a tiny tail-tip protruding from a cell.

On the 18th, the queen, with some hesitation, left the hive at 2 p.m., and returned after ten minutes' absence, running in very fast. The next morning she spent some time meditating in a cell, head downwards, so that her abdomen and wings could be plainly seen. She was there at noon, but could not be found at 1.30. At 2.30 she was back in the hive, having met with a drone and lost a piece out of her right wing in the adventure, and during the rest of the day she wandered uneasily from cell to cell, some workers attending her. On the 20th, she was laying freely and being made much of.

It was not long before every available cell held an egg in the few combs that the colony,

* It was not intended to allude to or insert the illustration—fig. 3—in the portion of Colonel Walker's article on his Observatory Hive that appeared in the BEE JOURNAL of February 6, page 51, and the word "larvæ" occurring on fourth line from bottom of page 51 (also on second line of page 52) should be *larva* in both cases, referring to one in the cell opposite to and just above the lower queen-cell in figs. 1 and 2, where the lettering was omitted. In fig. 2, AA should not have been opposite to the queen-cells, in which the fluid was never "translucent."

reduced as it was by swarming, could cover. Eggs kept accumulating. In many cases there were four or five; in one cell we were able to make out ten; in another our estimate was fourteen or more strewn at random. Still, anxious to fulfil her duty, the young matron continued to lay, and still—whether to keep up appearances or not, who shall say?—she gravely made her inspection of each cell before depositing the egg. And the workers, with the same cheery optimism that induces them, when queenless, to rear a princely palace over an egg that they must know can bring them nothing better than a disappointing drone, quite fell in with the idea. Not for them to give away the "little mother." So they took the conventional peep within, made belief to set things straight, winked a friendly eye, and proclaimed "all's well." This sad waste of material continued until the hive was finally cleared; truly a grand object-lesson for a bee-keeper of the let-alone school.

An able contributor to this journal (see vol. xxiii., p. 507) believes that eggs are moved from time to time, and finally placed in a horizontal position by the workers. That the movements take place no one will deny; but direct evidence must be furnished before we can quite determine the agency. May they not be produced by the gradual development of the larva within its membranous covering, the chorion? It does not seem probable that, amongst all the litter of eggs in each cell that I have described above, one egg in each cell was selected and moved in the directions required, the other eggs still remaining in the cell. How they eventually disappeared I cannot say; finally, only one larva was reared in each cell. Huber proved that the assistance of the workers was not needed for the due hatching of the larva. Watching his opportunity, he removed that portion of a comb in which he had just seen a queen depositing eggs, and having enclosed it within a box so wired over that no bee could obtain access, he placed it in the warmth of a strong hive, with the result that the larvæ hatched out as usual. Fancy combs were sometimes built on the two glass ends of Huber's leaf hives, although he was not so fortunate as to see bees reared therein, and having observed that bees entered these cells to seek repose, he accounted in that way for the constant visits paid by workers to cells containing eggs and young larvæ. I, too, have seen workers remain perfectly motionless for many minutes in empty cells. Once I saw one wake up with a sudden start and hurry off on some particular errand it must have remembered—the effect was very comical. I am not sure whether I ever noticed a worker in a cell that I was sure contained an egg, but I have watched them hundreds of times in those containing larvæ, and whether the latter were just hatched or had newly filled the cell the procedure was identical, except in the instance where I saw the larvæ being fed. The worker enters, waves its antennæ for a moment over the larva without touching it, devotes an uncertain length of time to polishing up the sides of the cell, and then departs. They are always polishing, and I believe it is just the same when the cell contains an egg. It is quite true that a worker generally looks into the cell in which a queen has just deposited an egg, but in many cases the peep is quite brief, and may well be put down to curiosity.

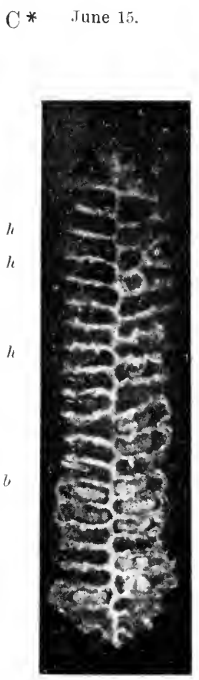


Fig. 3.

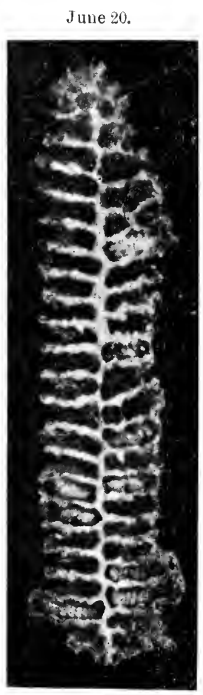


Fig. 4.

The illustrations (C and D) are from photos of a typical comb, taken at five days' interval. They contain honey, eggs if you could see them, and drone and worker brood in various stages of development; taken together they well show the changes constantly occurring in a healthy hive. At the lower end of C, on the right hand side, we find two unsealed drone brood (*a*, *a*); and above them a blank cell, three sealed workers, a blank, two sealed workers (though they happen to look like drones), a blank, a very small sealed worker (*w*), three apparent blanks, a small drone (*d*) in fluid; the rest apparent blanks. Taking same side of D we see the two lower drone larvæ (*a*, *a*) sealed, and then *three* blanks, for two sealed workers have been removed, and following upwards we miss a third sealed worker. The upper drone larvæ (*d*) is also sealed. It seems odd that the little worker nymph, almost an abortion, should have been left to bite its way out on the 26th, while larvæ well

* Honey disappears from cells marked *h*, and grubs from those marked *g*.

grown and apparently quite healthy were removed.

On the left of C, the cells marked *h* contain honey, of which the surface outlines show as whitish lines at angles that vary strangely in inclination, owing probably to their respective densities. The lowest of the three contains the most fluid honey recently gathered, and it is obvious that, as now constituted, its particles have not sufficient cohesion to permit of the bees filling the cell to the brim and closing it. Evaporation is needed ; the honey must ripen. Bees are working in *b* and in the four cells above it. The bottom cell contains a drone larva curled up and still unsealed.

Turn now to the left of D. The drone larva just mentioned was sealed on the 17th ; it has spun its cocoon, and is stretched out straight and motionless. The honey has quite disappeared, and in its place, if you could see them, are eggs. On both sides of D some of the larvæ had turned into nymphs, and their heads are beginning to colour. In the cell just above the worker, *w*, a little deposit of fluid marks the hatching of a larva, and the same, showing white, may be detected on the opposite side of the comb, one side higher up. Some of the cells in this comb have other cells behind them, and so fine are the wall partitions that, by careful focussing, the movements of bees and larvæ may be seen through them, especially when a front cell is filled with honey.

The three unsealed drone larvæ, shown at the lower end of C, are four to five days old. Curled up vertically, they almost float in fluid —fat, flabby grubs of uncertain outline. Along their backs, which are turned towards you, is a dark band, in reality of a beautiful orange hue. This is the stomach, as Swammerdam, the great anatomist, first showed us in his treatise finished in 1673, and its bright colour is probably due to the pollen on which the larvæ at this age are partly fed. The size of the mature insect is determined by the growth that takes place in the six days or so between hatching and sealing. There is no time to lose, and the larva is taking in nourishment by both mouth and skin. I suggest that it is to facilitate osmotic absorption that a clear space is left over the stomach, in the fat that elsewhere covers the larva. The orange band is clear of fat, the skin appears transparent, and the two irregular outlines of the fat on each side keep closing in and retracting like a pair of lips. As the larva grows the fat closes in upon the band, till, changing also in hue, the latter becomes a thin slate-coloured line. The food has now all been absorbed, the body has become firm and pearly white, the outline of its segments is clear, and mouth, eyes, and spiracles are visible. The larva has ceased to grow, and the undigested refuse of its food, of a red orange colour, covers the bottom of the cell. All the above features are more marked in the drone than in the worker, owing to the larger size of the former, and, doubtless, also to the more nutritious quality of the food administered.

It is not probable that such opportunities of observation as were this year vouchsafed will ever be given to me again, and with this comes the regret that I have not made more of them. But to get full benefit a relay of careful observers, day and night, and a special arrangement of artificial light are necessary, and neither of these were at my command. I shall be satisfied if I have conveyed to my readers a small fraction of the pleasure that my hive has brought me. Any want of clearness in the illustrations is entirely due to defective photographs. For various reasons it is very difficult to achieve success in this, and our Editor has made the very best of the photos furnished to him.—H. J. O. WALKER, Lieut.-Col. ("*South Devon Enthusiast*"), *Leeford, Budleigh-Salterton.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

IMPROVEMENTS IN FRAMES.

[4697.] With reference to J. D.'s letter in this week's B. J., I should say that to get a full force of working bees at the right time is a question not only of *management* and *appliances*, but also of *bees*—their strength, and the age and strain of queen. I should put management first in order of importance, bees second, and appliances third.

With regard to my account of my visit to Mr. Doolittle's apiary, "J. D." misquoted my words in saying that I "noticed all the frames were 11¼ in. deep in the ninety hives there." Mr. Doolittle does a good deal of experimenting and no doubt has several sizes of frames in his apiary. He, however, gave me to understand that he preferred the "Gallup" frame (11¼ in. by 11¼ in.), but this was probably for purposes of queen-rearing more than for honey production, as I judged that Mr. Doolittle does much less of the latter work now than formerly. I do not think that the "Gallup" frame would be at all suitable for honey-production in England, and I do not regard it as uncomplimentary to Mr. Doolittle to say this, first because he probably prefers it for the special purpose of queen-breeding, and second because climatic and other conditions are quite different in New York State to those prevailing in Great Britain, and the frame that has been proved to be the best for honey-production in the one place *might not* be the best in the other place. I say "might not" because, of course, bee-keeping is bee-keeping both in

America and Europe, and a frame that has been used successfully on the one continent is likely to produce good results on the other.

I am very glad you think of opening a discussion on "frames." The dimensions of the Standard frame are very convenient, and there must be very pronounced merit about any other size to improve upon them. When I was in America I was surprised to see the great diversity of sizes of frames used, and all were claimed by their advocates to be better for their purpose than any others.

Any improvement on the dimensions of the British Standard frame that might be brought forward would certainly take the form of a larger frame. The general opinion in this country seems to be that it should be a deeper frame, but in the light of the recent tendency in America for shallow brood-chambers it would seem that increase of length is quite as important as, or even more so than, increase of depth. Those who investigate this tendency for shallow brood-chambers will, I think, see that the chief reason for it has been to increase the area and size of the super relative to the brood-chamber, and the length of frame is to a great extent dependent on the size and number of sections that are to be accommodated over it. The matter of suitable size and shape of comb for wintering and building up in the spring seems to be of less moment. I do not mean to say that it is not of the greatest importance, but properly-managed bees appear to do well on any reasonable-sized combs. Of course the fewer and larger the combs there are the better it is both for the bee-keeper in manipulating and the bees in brood-raising. The exact size of frame that I should recommend as the best for trial depends on size and number of sections and other things, and must be the subject of another article.

I think that there is a decidedly useful line for investigation in improvement of the construction of the top-bar of the British Standard frame. For instance, it could be thickened from $\frac{3}{8}$ in. to $\frac{1}{2}$ in. or $\frac{5}{8}$ in. with advantage. The thickness of the top bar of the form of Langstroth frame used to-day in America is $\frac{7}{8}$ in. (!), but then, of course, this top bar is slightly longer than the top bar of our frame.

One of the most radical differences between the British and American styles of bee-keeping is indicated by the width of the top bar. In the British frame the top bar is $\frac{7}{8}$ in. wide, but in most American frames the width is $1\frac{1}{8}$ in. The bee-space between these wide top bars is only $\frac{1}{4}$ in., and there is also a space of $\frac{1}{4}$ in. above the top bars—*i.e.*, between the frames and the hive-cover or roof, there being no quilts lying on top of the frames, as in the British hives. This may be quite a new idea to some British bee-keepers, and they will wonder what is the reason for it. It is that all "brace-" and "burr-combs" on and around the top bars are practically done away with, and the top bars are not stuck to the cover or to one another; the $\frac{1}{4}$ in. space above and around them being just large enough to enable the bees to pass through it easily, and yet not large enough to let them deposit wax anywhere on the top bar. This plan greatly simplifies roof-construction, and quite does away with the necessity of bee-nibbled, moth-harbouring quilts, the frequent renewing of which may be quite an expensive business in a large apiary.

In the Langstroth frame the lugs or projecting ends of the top bar are very short. The long lugs in the British Standard frame are a great advantage, making manipulation much more easy and pleasant than it can possibly be with the Langstroth frame. This ease of manipulation results not only from the long lug, which is large enough to be easily taken hold of, but also from the fact that the bees are excluded from the lugs by means of the metal-end. No metal-ends are used with the Langstroth frame, and the bees are inclined to propolise the little lugs over and down, so that it is most difficult and unpleasant to take hold of them. In fact, the frames are not supposed to be handled by them at all, but in a part nearer the middle of the top bar. Of course, it is quite possible to make a no-hurt-comb top bar with long lugs, and I am at present experimenting with some hives fitted with frames made like this. Altogether, there are many pros and cons. in this question of frames, which is of the deepest interest and importance to bee-keepers. It is a subject I have spent a good deal of study and experiment upon, and I shall follow the discussion that you have promised us with the keenest interest.—F. W. L. Sladen, *Ripple Court, Dover, February 6.*

THE VALUE OF STRONG COLONIES.

[4698.] If it will not be in any way anticipating your promised editorial remarks in reply to the letter in last week's B.J. (4685, p. 57), I am sending in a few thoughts which occurred to my mind when reading your correspondents article in this week's Journal on "The Value of Strong Colonies." Your correspondent, "J. D." cannot, I imagine, have had the good fortune to read that fascinating book to bee-keepers, "Doolittle on Queen Rearing," or he would therein have found an answer to his questions contained in his article. As I happen to possess both a copy of his book and also a sample of his famous strain of bees, perhaps you will allow me to quote a few passages from the book for the benefit of those readers who do not possess a copy, and later, if it will be of any interest, will forward my experiences with the bees. In dedicating the book to Elisha Gallup, the inventor of the frame Mr. Doolittle uses in his ninety hives, he says that

Mr. Gallup truthfully claimed "that around the queen centres all there is in apiculture."

In the second chapter, which should impress on all the importance of good queens, he commences with: Upon no other one thing does the honey part of the apiary depend so much as it does upon the queen. Give me a good queen, one which can be brought up to the highest production of eggs just when we want them, and I will show you a honey crop if the flowers do not fail to secrete nectar. Again, when asking why one colony does so well and another not half so well, he states simply because one had a large working force of the right age and at the right time to take advantage of the honey-flow when it came.

Nowhere throughout the work do I find that he claims any of his success is due to the use of any particular hive or frame.

The December number of *Gleanings in Bee Culture* contains his review of the season 1901, and a comparison of the trials he had made with queens he had purchased, and his own strain which he had been trying to perfect for thirty years; this colony gave more honey by 65 lb. than the three other colonies combined, which had queens purchased from other breeders. Now, sir, I hold no brief for Mr. Doolittle, my object in writing this is to hinder the idea gaining ground that his success is due to the use of a larger or different frame, for I believe it is stated that Mr. Gallup himself used to say that a good swarm of bees would store almost as much honey in a half barrel or nail keg as in the most elaborate or expensive hive made, other things being equal.

If my experience is worth anything, it will not be, I venture to say, by the adoption of the "Gallup" or any other frame different to our Standard size which will secure us the largest yields of honey. Did not that colony of bees which made the record at the pan-American Exhibition at Buffalo this year have for their home a Danzy hive with frames only $7\frac{1}{2}$ in. deep, and I believe there is a tendency in America to a frame shallower than their standard. The Langstroth, therefore, nearer our Standard size, I have for several years tried, adding a shallow-body with frames below the brood nest early in the summer, and when the bees built brace comb between the two frames, thus making a frame about $13\frac{1}{2}$ in. by 14 in., left them to winter upon. I did not find the bees wintered any better this way, and next summer they would persist in storing honey in the body-boxes instead of in the extracting super. In my opinion, that if we keep the British or brown bees, a hive containing ten or eleven B.B.K.A. Standard frames is large enough.

But for Italian or Carniolians a hive that will take thirteen or fourteen Standard frames is better; these queens, being more prolific, require a larger brood-nest.—J. G., *Hinckley, February* 8.

HOW I MADE A "FRAME-HOLDER."

[4699.] When examining the combs of a hive, a "holder," on which to hang the first frame taken out, is a great convenience. One I made for myself has acted so well that I thought some of my young brethren at the craft might like to know how to make one. The materials required are three rivets and four pieces of strip iron, the latter $\frac{3}{4}$ in. wide and rather less than $\frac{1}{16}$ in. thick. Two of these pieces are $12\frac{1}{2}$ in. long, one piece 11 in., and the other 7 in. In each of the latter pieces punch or drill two holes, one $\frac{1}{2}$ in. from one end, the other $\frac{3}{4}$ in. from the opposite end, as shown in fig. 1.

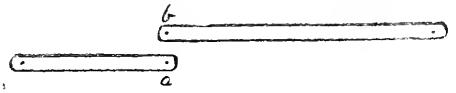


Fig. 1.

Rivet together the two pieces at A, B, leaving the joint loose enough to allow the pieces to fold together. Next bend the remaining two pieces to the shape of fig. 2, first punching a hole in each 1 in. from one end.

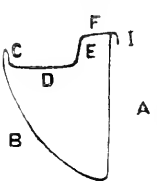


Fig. 2.

The dimensions of the parts are A, $3\frac{1}{2}$ in.; B, $3\frac{3}{4}$ in.; C, $\frac{3}{4}$ in.; D, 2 in.; E, 1 in.; F, $1\frac{1}{4}$ in.; and I, $\frac{3}{4}$ in. Before bending the angle between A and B, each of these "ends" should be riveted to the "back," care being taken to pass the rivet through the latter first; the joint being left "workable" as before. When the rivets are secured, the angle A—B should be bent so that A at top comes inside the bend F I. It will be found that there is a "springy" action at this point, so that when the "holder" is hung on the hive side, or back, it will remain quite firm and secure. When not in use it folds up compactly, as fig. 3. If this description is not sufficiently clear, I shall be glad to further explain any obscurity. — W. H., *Brilley Vicarage, Whitney-on-Wye.*

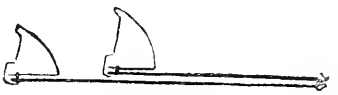


Fig. 3.

MY "BEE DOINGS" IN 1901.

[4700.] The bee-season of 1901—and so much as we have had of the year 1902—was in this district remarkable for three things.—1st, a high death-rate among stocks during the winter; 2nd, an entire absence of dark honey; and 3rd, the great number of truant swarms.

Having the care of nearly all the hives in the parish, and some just outside its borders, I may say nearly one-half of them were lost before the early spring of 1901 arrived. "Bad management," you will say. Well, it may be so in some degree, but not altogether correct, for many of the stocks that perished had an abundance of natural stores, and were well prepared for wintering. I put it down to the long-continued low temperature in the early months of the year 1901, following on the very mild weather that prevailed at the end of the previous year. Many bee-keepers outside our borders lost even more heavily than myself. Nor was the outlook at all bright for a good harvest when I saw that the bees were slow in getting strong as the honey-flow got nearer. However, our parish is rich in flowering trees and shrubs, which are much admired for their luxuriant growth. The late Marianne North, the well-known painter and botanist, whom I remember living at Mount House, painted many lovely views of this place. The same dear, kind lady established an apiary here in 1886 or 1887, the bees being in a portable bee-house, with separate compartments for six colonies. The bees did very well in honey-storing, but it was thought that the jarring of all the hives whenever one of them was disturbed led to bad temper and the bees becoming vicious. There are still two stocks in this same bee-house, still noted for honey-gathering and stings! They are, however, splendid section-fillers.

It seems to be an invariable rule, for a season of bad wintering to be immediately followed by a swarming year, and of truant swarms; the bees seeming to resolve on making up for winter losses in this way. About the month of June last I saw myself no less than twelve vagrant swarms, and, as I make it a rule to clean out my vacant hives and fit them up ready for swarms got by purchase or otherwise, I got a few of these by swarms taking forcible possession, though the hive-entrances were closed. I always do this because I consider it is not honest to prepare hives as "decoys" to entice swarms into them. Several lots got "possession" by entering through any cranny or crevice the bees could find. One swarm entered the hive through a badly-fitting floorboard; another by a small hole in the roof, working their way to the combs below through the loosely laid-on quilts.

By the end of August all these swarms were in fine order for wintering; not an ounce of food needed. They also yielded a fair crop of surplus, bearing in mind that our harvest comes on by mid-June, after which time the meadows are mown for hay. The quality, too, was so good that it was all sold out at a fair price, and I have had to buy more to meet the demand.

Insurance for Bee-keepers.—I am deeply interested in the insurance scheme now being advocated, my bees being located in two small gardens surrounded by meadows in which valuable animals graze all through the summer months. Should one or two of these animals be attacked and killed by my bees, it would mean ruin to me, for I am only a working gardener, and have to look to my bees for some return for labour and capital invested; but I have not made enough to pay heavy damages. This being so, I think the sum of 1d. per hive insufficient; 3d. would not be too much. I am rather afraid that a sufficient number will not take interest enough in it to make 1d. per hive pay. And I for one would gladly pay the higher amount if it could be arranged that way. Others in this neighbourhood would, I think, also do so. Not having seen our secretary, who called when I was away from home, I do not know whether anything will be done through him, but I will gladly send on my money if asked, and get what other bee-keepers to join I can.

Thanking our Editors for past favours and advice in difficultes, and for the valuable help I receive from your always welcome journal, I send hearty good wishes to all bee-keepers in our favoured isles.—W. HULANCE, *Wotton-under-Edge, Glos.*

P.S.—I am glad to report a still clean bill of health. No foul brood in all these years in this parish.

DISTRICT B.K. ASSOCIATIONS.

[4701.] Referring to the discussion proceeding in your valued pages anent District Associations, I note that none of the County B.K.A. Secretaries have taken any part, beyond Mr. Phillips (on page 35, 4658). I would therefore ask: Cannot some of the county secretaries give us, through the medium of your columns, some assistance in the way of advice and suggestions of what can be done to help forward this laudable object? I am rather afraid there is more enthusiasm among non-members than among those who are members of associations, as instanced by the manner the outsiders have taken up the Insurance scheme.

The Editors—in a footnote to my previous remarks on page 35—were of the opinion that there would be some difficulty in maintaining the enthusiasm necessary "to keep a local bee-club on the move" in districts where few persons keep bees. I would say, in reply, that in this locality the interest taken in anything pertaining to bee culture, and the desire to get into closer touch with each other to secure the benefit of each other's experiences, &c., is pretty well up to "boiling point," although it is at present the "long vacation" so far as bee manipulation is concerned.

The purchasing of supplies such as sections, foundation, &c., in bulk for members' requirements, thus effecting a saving in carriage and also the advantage of lower prices for the larger quantities, would be one point where a local club would score over the county body, as in their case the cost of distribution would be entailed—a decided advantage.

With an expert as secretary and a few willing helpers, these local associations would soon develop into really useful institutions, provided the county associations encouraged and gave them assistance where possible.—B. MAD, *Walsall, February* 8.

P.S.—In case of a local branch being formed in this neighbourhood, a parcel of back numbers of B.B.J. would be helpful. Could this be arranged? At present I can only trace six copies coming into Walsall weekly.

[We will be very pleased to forward a parcel of back numbers of B.B.J. free on receipt of stamps to pay cost of parcels post.—EDS.]

Queries and Replies.

[2796.] *Troubles with Foul Brood: Compulsory Inspection.*—1. Can you give me address of the Secretary of the Bee-keepers' Association for Derbyshire? I wish to become a member. I am but a new starter at bee-keeping, and am willing to go in also for insurance. 2. There are some half-dozen bee-keepers in this town, but we are much bothered to know what to do as to one bee-keeper here has some five hives, all of which are full of foul-brood, which gives it to ours. He will not take any steps to eradicate it, and is deaf to all personal and friendly representations or persuasions, probably through indifference and ignorance. How can we deal with him? Would the Derby expert call with us and try and persuade him to get rid of his hives and start fresh ones? 3. I understand there is no legal remedy against him. Is this so?—BUXTONIAN, *Buxton, February* 5.

REPLY.—1. The Hon. Secretary of the Derbyshire B.K.A. is Mr. F. Walker, 64, Gerard-street, Derby, who will, no doubt, render what help he can to a member. 2. You have no remedy at law for the action of obstinate bee-keepers of the kind referred to. Compulsory powers were sought for some time ago, but Acts of Parliament are not easily obtained in these days. 3. An influential deputation waited on the President of the Board of Agriculture at the time (Mr. Herbert Gardner), but no good could be done in the then congested condition of Parliamentary work, and it is doubtless far worse to-day.

[2797.] *Moving Bees One Hundred Yards.*—As a reader of your valuable BEE JOURNAL, I beg to ask an answer to a few questions through the same. I am a bee-man of about two years' standing, and possessing only at present six stocks, all worked on the "W. B. C." hives, which I wish to remove from my present house to another, about 100 yards distant. I am naturally very anxious to know:—1. How soon can I remove my bees? 2. How far is it necessary to take them away temporarily, if at all? 3. How long must they remain away before bringing them back to my new residence, which I enter in March next?—J. CHARLTON, *Weston-super-Mare, February* 15.

REPLY.—1. But for the short distance the hives might be moved at once, and if the present frost keeps the bees indoors for a couple of weeks longer, it will be fairly safe to move them, provided that means be taken to alter the outward appearance of the hive fronts, so that the bees may note the change. 2. If removed at all temporarily, about two miles. 3. Till they have flown freely for from ten to twenty days.

[2798.] *Using Mouldy Combs.*—Would you kindly tell me what the effect would be if mouldy frames were put to a good stock? Would the bees clean away the mould? My experience is that once combs have got mouldy they are no longer fit for use. I have at present some mouldy frames which I am keeping in a dry atmosphere, hoping to be able to brush off the mould and to see once more if the bees will make use of them.—W. HORSFALL, *February* 13.

REPLY.—The bees will clean away the mould, but it is false economy to allow them to waste time and labour in doing so. Melt the mouldy combs down for wax, and substitute full sheets of comb foundation as being better and cheaper in the long run.

Echoes from the Hives.

Hitcham, Ipswich, Suffolk, February 13.—So far my bees have fairly successfully weathered the storms of winter. I commenced the cold season with six hives. With one it was a foregone conclusion that it would perish—only a handful of bees and an old queen. I have had to feed one stock. The remaining four have been well supplied with stores, and have remained undisturbed all winter. I introduced a hybrid Carniolan-Italian queen into one of my stocks on September 21. About Christmastime I found young bees flying freely with the familiar yellow bands; all the other bees are the ordinary black. When the present snows have disappeared and the crocuses are in bloom, I expect there will be a joyous "hum." I have no difficulty in getting my bees to take artificial pollen (pea-flour). I begin by putting the pea-flour into our earliest crocus blooms, and when once the bees taste the substitute for pollen they will soon find it in boxes, wherever placed; in fact, it is surprising to see the quantity they will take into their hives. Our chief honey source in this neighbourhood is the bean crop.—W. HORSFALL.

Headley Park, Epsom, Surrey, February 17.—Just a line to add to your "Echoes from the Hives." Here—four miles from Epsom—we have been having snow for the last three days, while it has been quite clear of it there.

On Sunday last the sun came out for a short time, and some of the bees came out for a cleansing flight. There are few bee-keepers in the district—only three cottagers keep them. Only one, however, "believes in" bar-frame hives. I have just got a magic-lantern, and naturally my first slides are on bee-keeping. If there is anything which impresses the modern *modus operandi* of the bee keeper on one's mind it is showing and explaining the slides to one's friends, as otherwise you have to fly to the "Guide Book" for the desired information, a performance of difficulty by the aid of the lantern! Do you know where I can procure a slide representing "a bee getting the honey from the flower"—to show where the honey is?—D. MAPPIN.

[We are not aware of any photo from Nature representing the bee in the act of gathering nectar from a flower. Perhaps some reader may have heard of such, and, if so, will kindly communicate the fact.—EDS.]

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

T. H. (Chesterfield).—*Advertisement Disputes.*—However desirous those who buy and sell through our advertising pages may be to accept our services as arbitrators in matters of dispute (and we value highly the confidence placed in us), it is impossible for us to arbitrate regarding goods bought, sold, or exchanged. With reference, however, to the case in question, we have gone through the voluminous correspondence forwarded, and our opinion is that—unless an amicable arrangement can be arrived at—it is clearly a case for a County Court Judge to decide, after hearing witnesses on both sides. It would do no good for each party to deposit £5 with us till the matter is settled, without some way out of the difficulty was in sight; but certainly an inspection of the hives is a *sine qua non* for those who are to judge from the expert's point of view. We return letters by post, as desired.

J. L. SAXBY (Clevedon).—*Working for Increase.*—1. No date can be given as the "best time of the year" for making artificial swarms. They should only be made when the hives to be swarmed are nearly full of bees, with weather settled and warm, and when drones are flying freely. 2. If a good queen is available you may requeen the swarmed hive, but the bees will requeen themselves if the artificial swarming is properly done. 3. A swarm, natural or otherwise, cannot be expected to store surplus till the bees are well on towards the completion of comb-building in the brood-chamber. 4. There is no risk in artificial swarming if properly done. Do not mind the "head-shaking" of your "old-fashioned" bee-friends, read the "Guide Book" carefully, and carry out the instructions given therein, and you will not need to ask us to tell you how to "hive swarms" or "give supers," or answer any of the other queries put. Without a text-book to guide you, mischief will surely follow; that is the least we can say.

J. W. (Northumberland).—*Responsibility for Show Mismanagement.*—You need have no fear of any kind of "exposure" being published in our columns without our being furnished beforehand with the views of both parties in the case. Nor do we see how BEE JOURNAL readers can fix responsibility on any one but the officially-recognised manager of the exhibition in question.

J. P. (Stokenchurch, Bucks).—*Candy-making—Gas-tar for Hive Legs.*—1. The sugar sent (unrefined moist sugar) is not suitable for making bee-candy. It will deliquiesce, or melt down (as your sample had already done when received) and run among the bees and combs. Loaf-sugar makes the best candy, and, but for the faulty material used, yours is fairly well made, but not quite boiled long enough. 2. We have no faith in the remedy for foul brood you mention. 3. You need have no fear that gas-tar will do harm to the bees, and it will tend to keep ants out of the hives as desired, if the hive legs are *re*-tarred when necessary.

"W." (Wolverhampton).—*Soft Bee-candy.*—Sample of candy is by no means bad, but it is rather too hard. Soft candy should, when scraped with the finger-nail, readily become soft and "buttery," *i.e.*, almost of similar consistency to the fondant sugars found in chocolate creams.

W. M J. (Aberystwyth).—BEE JOURNAL *by Post.*—The B.B.J. is posted to all subscribers on Wednesday of each week, and delivery only on Friday is, therefore, owing to some fault at the "other end." Please inquire into it and note date of London post-mark.

"CHI BETA" (Newmarket).—*Bee-candy.*—Your sample is too hard in texture; it is also apparently not made from loaf sugar, as it should be. Otherwise it is smooth in grain and fairly well made.

R. PATEMAN (Llanbadarn Fawr).—*Honey Sample.*—Honey to hand is of very good quality; it is almost wholly from white clover, and is a good table honey.

W. F. BURKHILL (W. Hartlepool).—*Hartlepool and District B.K.A.*—The Hon. Sec. of the Northumberland and Durham B.K.A., "Mr. Jas. Waddell, Wooler," will no doubt be able to furnish the information required, if written to.

Suspected Combs.

F. R. (Farmboro', Bath) and T. P. (West Norwood).—There is nothing worse than pollen in either sample of comb sent—not a trace of disease.

Editorial, Notices, &c.

USEFUL HINTS.

(*Continued from page 71.*)

SIZE OF FRAMES.—The several letters in this issue on the question of frames differing in size from the B.B.K.A. standard, tend to show how difficult it is to clearly define the attitude taken by the BRITISH BEE JOURNAL on this—to some minds—vexed question. It may seem—to those who never thought of bees or bee-keeping three or four years ago—very dogmatic for editors to even attempt to stand firm on a matter which has come before them repeatedly in the course of their editorial experience, and when we in the slightest degree deprecate discussion on what has been repeatedly thrashed out already, those—who only begin to think now as we and many others thought years ago—will surely agree that it is not too much to remonstrate gently by again advising those who are making a start now to "begin where we left off." On this point the diagrams, with measurements, of various typical frames, shown last week, are instructive. It will be seen that No. 1 C. N. Abbott's taper-frame is about of the same capacity as the one that meets with most favour among those who desire an increase in size; and yet this frame has to-day practically fallen into disuse. This being so, it seems idle to bring forward a frame of that size, and expect that it has the smallest chance of coming into favour. If, then, in addition, we remind readers that Mr. Abbott—who was the founder and first Editor of the B.B.J.—had the wisdom to drop even his own pet idea of a large-sized taper-frame, and associate himself with those who thought out and discussed the subject in all its bearings; while in the end he became a strong supporter of the B.B.K.A. Standard frame. Personally we tried the frame (No. 1), as shown in our last issue for several years, only to give it up in favour of the "Standard" (No. 3).

As regards size of brood-nest, where does the "limit" come in? A man may have his hives made for ten frames or any number, and thus provide egg-room for the most prolific queen ever hatched. In concluding our "Hints" on this subject we repeat the argument used last week with regard to the size of frame used in securing the best recorded results in weight of honey. We cannot get away from the facts.

BEES AND FLOWERS.—A very animated and interesting discussion has been going on for some time past in a Devonshire paper on the question, "Do bees visit several species of honey-yielding blossoms promiscuously, or do they confine their visits to one species only on one journey?" As in the matter of frames, "opinions vary," but if we ask a practical bee-man—one who, probably, has closely observed his bees at work for ten or twenty years—he has no hesitation in declaring that "Bees don't wander about among various species of bloom when foraging." At the same time, he knows that instances do occur when they may seem to depart from this rule, and it will be useful here to give an extract from the letter of one of the stoutest champions of the bee-man's theory. He says:—

"I will quote the opinion of Darwin on this subject, which, it will be seen, largely coincides with that of Lubbock, and, as will be observed, has received the support of Muller, the great German botanist, besides other lesser known observers. I quote from chapter xi. of Darwin's book on 'Fertilisation in the Vegetable Kingdom':—

'All kinds of bees and certain other insects usually visit the flowers of the same species as long as they can before going to another species. This fact was observed by Aristotle with respect to the hive-bee more than 2,000 years ago, and was noticed by Dobbs in a paper published in 1736 in the Philosophical Transactions. It may be observed by anyone, both with hive and humble-bees, in every flower garden; not that the habit is invariably followed. Mr. Bennett watched for several hours ("Nature," June 4, 1874, p. 92) many plants of lamium album, L. purpureum, and another labiate plant, nepeta glechoma, all growing mingled together on a bank near some hives, and he found that each bee confined its visits to the same species. The pollen of these three plants differs in colour, so that he was able to test his observations by examining that which adhered to the bodies of the captured bees, and he found one kind on each bee. Humble and hive-bees are good botanists, for they know that varieties may differ widely in the colour of their flowers, and yet belong to the same species. I have repeatedly seen humble-bees flying straight from a plant of the ordinary red dictamnus fraxinella to a white variety; from one to another very differently coloured variety of delphinium consolida, and of primula veris; from a dark purple to a bright yellow variety of viola tricolor; and with two species of

papaver from one variety to another which differed much in colour; but in this latter case some of the bees flew indifferently to either species, although passing by other genera, and thus acted as if the two species were merely varieties.'"

We think that a perusal of Darwin's weighty words will convince most practical bee-keepers that, whatever entomologists of varying degrees of eminence may say on the subject, the "bee-man" is about right.

INSURANCE FOR BEE-KEEPERS.—We continue to receive inquiries and suggestions, good, bad, and indifferent, regarding the proposed scheme; but when it is known that as soon as the Council of the B.B.K.A. have mastered the practical difficulties standing in the way, and have drawn up such rules and regulations as they think will best meet the case, full particulars will be published in this journal. Meantime, we assure those who are anxious that no time is being lost.

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the Council was held on Thursday, 20th inst., Mr. F. B. White occupying the chair. There were also present Miss Gayton, Messrs. W. Broughton Carr, W. F. Reid, W. J. Sheppard, E. D. Till, T. I. Weston, C. N. White, and the Secretary.

Letters apologising for enforced absence were read from Messrs. W. H. Harris, P. Scattergood, and E. Walker.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz.:—

Miss Adelaide Bailey, Horsington, Bath.

Mr. D. M. Macdonald, Schoolhouse, Morinsh, Ballindalloch, Banff.

Mr. Fredk. Sworder, Post Office, East London, Cape Colony, South Africa.

Mr. Reginald Wood, Bottisham Lode, Cambs.

The Report of the Finance Committee as presented by the Chairman gave details of income and expenditure to date, and was duly approved.

In accordance with the recommendations of the Examiners of Candidates for 2nd Class Expert Certificates, it was resolved to grant diplomas to Miss C. M. Wallace, Messrs. L. L. Jacobs, H. Samways, A. Sandys, G. E. Skelhorn, and E. Pitt.

The secretary laid upon the table a statement giving a summary of the replies received from members and non-members wishing to join in the Insurance Scheme. Letters were read from the Editor of the *Irish Bee Journal* and the Secretary of the Irish B.K. Association, asking that members of the I.B.K.A. should be admitted to the benefits of the insurance on the same terms as British bee-keepers, and the secretary was instructed to say that the right to participate in the scheme could be secured by the affiliation of the Association with the B.B.K.A. On the motion of the Chairman, seconded by Mr. C. N. White, a committee—consisting of Messrs. W. Broughton Carr, W. H. Harris, W. F. Reid, T. I. Weston, and the Secretary—was appointed to draft the further rules and regulations necessary for putting the proposals into effect.

Nominations of judges to officiate in the hive and bee department at the Carlisle Show were made, for approval by the R.A.S.E.

Gifts of the following appliances for use in the Association's apiary were reported and accepted with thanks :—

From Mr. W. Dixon, bar-frame hive.

From Mr. H. Edwards, swarm-catcher.

Applications from the Secretary of the "Confectioners" and "Grocers" Exhibitions, for the grant of medals and diplomas as last year, were considered and agreed to.

A large number of letters on various subjects were read and dealt with by the Council.

The next meeting will be held on Thursday, March 20.

ESSEX BEE-KEEPERS' ASSOCIATION

ANNUAL MEETING.

The twenty-second annual meeting of this Association was held in London on Thursday, February 20, under the chairmanship of Mr. T. I. Weston. The report, which had been previously sent to the members, stated "That steady progress continues to be made. The first year of the new century proved favourable to bee-keepers, and a fair average yield of honey has been the rule in Essex. It has also been of good quality, with an absence of honey dew. An excellent exhibition of honey and bee appliances was held at Lexdon Park, Colchester, in June, in connection with the annual county show of the Essex Agricultural Society, which attracted 100 entries in twenty-two classes (for full report of the show *vide* B.K.J. of June 20, vol. 29).

Seventy-seven new members joined the association during the year, bringing up the total membership to 334.

A new portable bee-tent has been purchased, and was in use at six shows.

The expert commenced his spring tour on April 9, and finished on June 8. His autumn visits commenced on August 6, and lasted until October 14, the total number of stocks of bees examined being 3,541. Foulbrood shows no sign of diminution, and calls for extreme watchfulness and care on the part of bee-keepers to prevent the disease from further spreading to healthy stocks.

The demand for the Association honey labels continues to increase, 2,875 having been sold during the year.

The statement of accounts shows the Association to be in a sound financial position, with very few subscriptions in arrear.

The report and balance-sheet were unanimously adopted.

The Countess of Warwick was re-elected President, and Vice-Presidents were appointed. The following members constitute the Committee for 1902: Miss Aukland, Dr. Elliot, Messrs. G. R. Alder, J. Chesson, Bruce Cook, A. H. Dearden, F. G. Kimber, O. Puck, A. W. Salmon, T. I. Weston, T. W. White, and A. Milne. Mr. W. M. Tufnell was re-elected Treasurer, Mr. O. Puck Auditor, Mr. W. J. Sheppard Hon. Secretary, Mr. W. A. Withycombe Expert and Collector.

From the foregoing it will be seen that the Association is doing useful work in the interests of bee-keeping.—W. J. SHEPPARD, Hon. Sec, *Chingford, February* 22.

NOTTS. BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the above association was held on February 15, at the People's Hall, Nottingham. The Mayor (E. N. Elborne, Esq., J.P.), presided over a numerous attendance. The Mayor said he wished to show his sympathy with the association which was doing good work. He did not know much about bees, but he thought that in the three or four thousand gardens in the city bees would be very helpful. He hoped that at the show at Colwick Park next year the bee-keepers' association would be represented. The Secretary read the annual report, from which we learned that sixteen members had been enrolled, and the association had come out of the year better in regard to finances than they had expected. The debt of £3 had been reduced to £1 11s. 4d. Last season had been a fairly good one all round for the yield of honey, and for quality it had been excellent. The shows held during the year had been very successful. In regard to instruction in bee-keeping the County Council had increased their grant from £30 to £40, and by its aid the association had been enabled to give lectures at various places in the county. The Nottingham City Council had revived their grant of £2 2s., and it was proposed to have a lecture and a demonstration. The report and balance-sheet were unanimously adopted, and the officers for ensuing year were elected as follows:—President, Viscount St. Vincent; Vice-Presidents, the Duke of Portland, Earl Manvers, W. S. Ellis, Esq., S. H. Sands. Esq., J.P.; Mrs. J. Hind, Rev. H. L. Williams, M.A.; A. E. Trimmings, Esq., H. W. Cooper, Esq., W. D. Warwick, Esq., and J. Bowes, Esq. Committee, Messrs. G. Smithurst, T. N. Harrison, T. Carlin, S. W. Marriott, A. G. Pugh, G. E. Puttergill, G. E. Skelhorn, W. Swann, and J. C. Wadsworth. Hon. Auditor, Mr. P. Scattergood. Secretary and Treasurer, Mr. Geo. Hayes, 48, Mona-street, Beeston, Representatives to meetings of B.B.K.A.. Messrs. A. G. Pugh and G. Hayes.—(*Communicated*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4702.] The hard frost has at length broken up, and been followed by a cold thaw, so that very few bees have left the hives for a cleansing-flight. On the 15th inst. I noticed the entrances of a few hives fouled somewhat, showing that the long confinement had had its usual effect, as on ordinary flights the excreta is dropped by the bees when on the wing. We are hoping for some warm sunshine, so that every colony may have a good airing-flight, and get a chance of re-storing their larder near the brood-nest.

Bee-keepers generally will feel indebted to Colonel Walker for his interesting article on "An observatory hive." His observations have verified the truism that "bees do nothing invariably." It seems strange, however, that the three sealed worker larvæ should have been removed. Are we to suppose that bees are cannibals in order to account for this? The photographs show it was not for want of food, and yet these three future workers were cleared out! Therefore, unless we regard them as "weaklings" or sickly, we can give no reason for them being sacrificed. On the other hand, as the larvæ were sealed in, how could the bees know they were such? And seeing that the small, undersized larvæ were allowed to mature, this looks as if the instinct of the attendant bees was at fault.

The B.B.K.A. "Standard" Frames.—These are once again to the fore, and for myself I beg to suggest that those who use the "Combination" hive, or hives on that system, have the power of increasing the size of brood-nests without any change in the size of the frame. The "Standard" frame is a great advantage when transferring bees and combs from hive to hive; interchangeability rendering the work easy and satisfactory to the bee-keeper, and although in some districts I believe a frame, say, 10 in. deep would be an improvement, possibly in other districts the "Standard" is large enough for all requirements. There are so many things in which some progress has been made since the B.B.K.A. "Standard" frame was adopted, such as

"packing bees for winter" earlier than our bee-masters of twenty-five years ago. There is also the advance made in candy-making as a winter food, and the system of using more super-foundation than formerly, thus inducing the bees to store more in the surplus compartment of the hive. All these things help to increase our total output of honey, and as we feed earlier to replace stores consumed, we get the early gathering all stored in the supers. In using the "Standard" frame, present-day bee-keepers have adapted their management to the hives on hand, and it will only be by unbiassed competition in apiaries located side by side that this matter will be successfully demonstrated. I have no doubt that our late editor, Mr. C. N. Abbott, had good reasons for his advocacy of a deeper frame, and he had also some good points in his "Taper" frame. This idea was to prevent killing bees when lifting a frame, as often happens with nervous bee-keepers with the rectangular oblong frame. I have from time to time advocated a wider top bar; in fact, have now in use a gross or two of Abbott's wide end 1⅞ in. wide top-bars, and these bars effectually prevent brace-combs being built. These frames are also more free from propolis than top-bars of ordinary width. If a conference of bee-keepers should ever be held to discuss the question of altering the present "Standard" frame I should advocate the alteration I have named above.—W. Woodley, *Beedon, Newbury.*

ROBBING DISEASED BEES.

[4703] Your correspondent, "Wm. Loveday," in "Essex Notes" (4680, page 55), brings to my mind a thing that happened last year which I will relate, not because of the value of the circumstance in itself, but more especially because the recording of such instances may lead to free expression of opinion as to cause and effect, &c.

Four years ago this coming March I started an out-apiary of twenty colonies, which in the second year after establishment contracted foul brood through robbing a diseased stock situated about half a mile from them. The disease spread so rapidly that I despaired of saving a single colony. In the four seasons I had, by driven bees and swarms, added eight stocks to my first instalment, but in June of last year I had only thirteen left, and all these I found on examination to be more or less affected, six of them very bad, which I cleared out, leaving the remaining seven to try their luck until the autumn, it being my intention to make a clean sweep as soon as the honey-flow was over. As the autumn drew on every preparation was made to carry out the deadly work, and I set out for the purpose. On reaching the spot and glancing along at the entrances, I was surprised and almost startled at their apparent strength, and as a pretty correct idea of what is inside may be formed of outside appearances, I felt sure by what I saw that a great change had come over those few colonies. I next peeped at supers which I had put on as safety valves, and here again was a surprise, for some were full and all had some surplus. So after taking supers off I made a careful examination of each colony, but not a trace of disease could I find anywhere. In June the cells containing foul brood in these colonies averaged about one cell to the square inch each side of the comb, but in the autumn, the patches of brood were perfectly healthy and clean, save an occasional empty cell from which young bees had recently emerged. Of course, this entirely changed my plans, and glad indeed was I to be spared (at least for a time) the sickening work of destroying stocks of bees with brimstone fumes. I confess I do not think these stocks are entirely cured, but for such an effect there must be a cause which is not found in what is generally expressed by the term "a good season." I think it would be useful to have an exchange of ideas on the question:—Why a good season is helpful in ridding us of the pest. I am pleased to say that my home apiary of over forty colonies are free from disease, and I am already looking forward with pleasure to next month when I usually commence real business.—Owen Browning, *Kingsomborne, Hants.*

(*Correspondence continued on page* 86)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

On receiving from M. Dennler photo of the beautifully situated apiary reproduced on next page, along with the expression of a desire to have it included in our "Homes of the Honey Bee," we gladly agreed, and knowing of the cordial friendship existing between our Senior Editor and Mr. Dennler, wrote Mr. Cowan asking him to deal with the notes sent to go along with the picture, which he has done. Mr. Dennler wrote as follows:—

"You will receive by this same post a photo of my apiaries, which I think you may like to publish in your Bee Journal. My name is no doubt well known to you, as it is to Mr. T. W. Cowan, whose old friend I am. I am the 'Rédacteur' of the *Elsass Lothr. Bienenzuchter*, and a reader of your valuable paper, in which I am still remembered, for I always read my name in the advertisement ('Beeswax,' by J. Dennler).

"We do like, in Alsace, the nice and interesting pictures of your English apiaries, and I am thinking that your English bee-keepers would be interested, too, to look at a foreign apiary.

"I shall consider it an honour if you grant it a place in your Journal."

Mr. Cowan sends the following interesting notes regarding his friend, M. Dennler:—

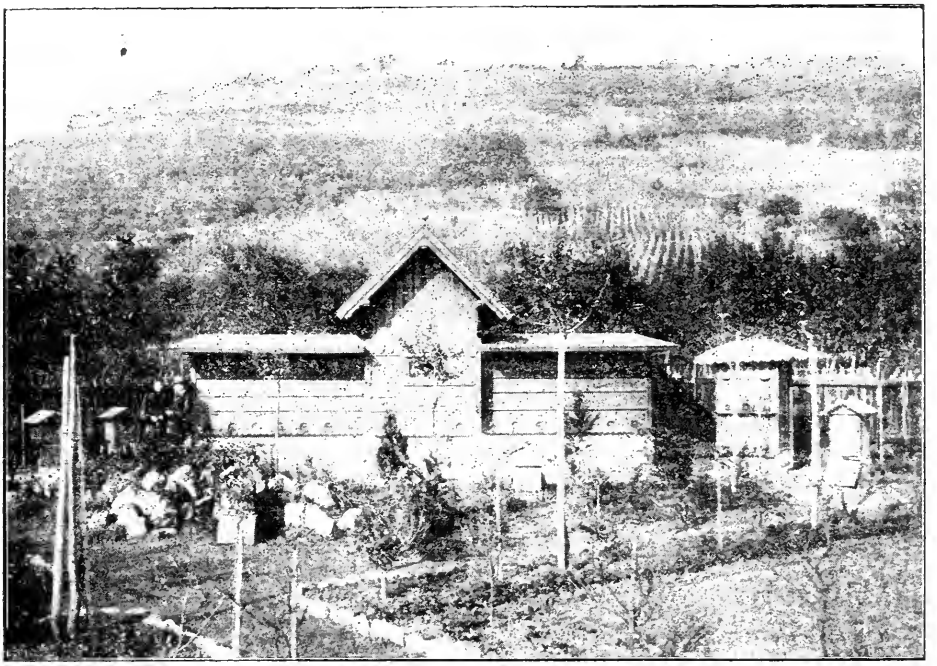
About a year ago M. Dennler left Enzheim, and is now residing at Mutzig, a lovely little town situated in the Bruche Valley of the

Vosges mountains, not far from the well-known ruins of Girbaden and Burg Niedeck.

The apiary stands in the garden at the foot of the Felsberg, which is well seen in the picture. This mountain is covered with acacias, vines and other fruit trees, heather, and pine forest. As a whole, the country is favourable to bee-keeping, and M. Dennler tells us that the harvest of honey from acacias and lime trees last season was a grand one.

The large bee-house in the centre has one story, and accommodates eighteen colonies of bees. On the right stands another bee-house containing six colonies (Bastian system), and the others are all single hives.

On the left of the picture stand M. Dennler and his wife, who also takes a great interest in the work.



M. J. DENNLER'S APIARY, MUTZIG, ALSACE, GERMANY.

As M. Dennler only gives us a description of the picture, which we have much pleasure in reproducing, we supplement it by giving more particulars about him, feeling sure that our readers would like to know more of a man who has done so much for bee-keeping on the Continent.

M. Dennler commenced bee-keeping when he was only ten years old. On May 26, 1854, a schoolfellow of his made him a present of a swarm, and his father rather encouraged the son by building an apiary, and he became interested in bee-keeping himself. Four years later, in 1858, the father and son had already thirty-one stocks in straw skeps, such as are used in that country. But the honey harvest was always very poor, so that from 1854 to 1867, during fourteen years, they only obtained a surplus of 180 lb. in all. The largest quantity in one year was 55 lb., and this was in 1867. In 1860 they only got 50 lb. from twenty-six hives, but in the five consecutive years, 1860 to 1865, they did not get a single pound of honey, although they always had from fifteen to twenty hives. Such an experience would have disgusted many a would-be bee-keeper, but M. Dennler was made of better stuff, and his energy and perseverance have enabled him to become not only a master of the situation but of the science also. It is perfectly true that the neighbourhood surrounding M. Dennler's former residence was not an El Dorado for the bee-keeper, as we can ourselves testify, having visited him at Enzheim; but it was not the worst place that could have been chosen for bee-keeping. For a year past M. Dennler has resided at Mutzig.

The first important work that M. Dennler commenced to study was "Les Abeilles," by Frarière, but it was not until 1868 that a new era in bee-keeping began to dawn in Alsace. M. Bastian, pastor of Wissenbourg, introduced bee-keeping with movable combs. M. Dennler was one of the first to adopt the new method and to become a discipline of M. Bastian, and to propagate these methods.

In 1873 M. Bastian started the journal

called the *Elsass-Lothringischer Bienenzuchter*, and made M. Dennler editor, giving him as a colleague M. Zwilling, and appointing these two gentlemen as lecturers in Alsace and Lorraine. Both French and German are spoken in Alsace and Lorraine; therefore it is necessary for the lecturers to know both languages, and it is for this reason that the journal is printed partly in French and partly in German.

From this time scarcely a year has passed without M. Dennler's visiting some exhibition, and he has generally been successful in securing prizes, so that he has a fine collection of medals and diplomas. He thus has successively visited Germany, Austria, France, England, and Switzerland. He considers that he has been specially favoured by being able to study the various methods in the apiaries of the leading bee-masters of Europe:—In Germany, with Dr. Dzierzon at Karlsmarkt, Schmied at Eichstadt, Huber at Niederschopfheim, &c.; in Switzerland, with M. Bertrand at Nyon, and J. Jeker at Olten; in France, with the Abbé Collin in Nancy, Hamet in Paris; and in England, at our apiary in Horsham, and Mr. Abbott's at Southall. M. Dennler always speaks with particular gratification about his visit to England, as it was at our late country residence in Horsham that he met some of the leading bee-keepers in England, as well as Mr. Gravenhorst, of Germany, and Mr. Newman, of Chicago. It was also there that he, Mr. Gravenhorst, and Mr. Newman were each presented with a silver medal of the British Bee-keepers' Association as a souvenir of their visit to this country.

M. Dennler has had very great experience, and, after having tried *all* the different races of bees known to this day, he has gone back to the common native bee, and is convinced that, as far as regards energy and mildness of temperament, it deserves preference before all others. The principle which he adopts is summed up in a few words. It is, *to have only young, vigorous queens of one year old or, at the most, two years. These produce strong colonies, which only can give good results, and are able to winter under the best conditions.* With such queens the hives must be very roomy, and capable of enlargement according to requirements.

As a writer, M. Dennler was at one time well known to our readers, and his reviews of Continental bee-papers, which used to appear in the B.B.J. from time to time, were read with much interest.

M. Dennler has also written a number of pamphlets. "Der Honig als Nahrung," and "Le Miel et son Usage," of which nearly 100,000 have been circulated. "Das Bienenwachs und seine Verwertung" we have translated into English under the title of "Beeswax; its Economical Uses and Conversion into Money." It is a pamphlet well worthy of study by any one interested in wax. "Die Wachsmotten" is another useful pamphlet on the wax-moth.

M. Dennler is in the prime of life, and we hope he may long continue in health to work for the advancement of bee-keeping.

CORRESPONDENCE.

(*Continued from page* 84.)

SOME ESSEX NOTES.

ABOUT FOUL BROOD.

(*Continued from page* 56.)

[4704.] (*O.*) This bee-keeper told me at the outset that he had taken a dislike to bees, and already advertised his apiary (which was of considerable proportions) for sale in the B.B.J. Therefore, when he inquired whether I would endeavour to assist him in effecting a sale, I had in mind that the owner was well up in the social scale, and knowing also that he had had some years' experience with bees, it did not occur to me to ask any particulars, as I was told that the bees were all right. But a few days after, when about to carry out the request made to me, I thought it would be best to examine the hives myself before doing any selling. I found foul brood in all but one of the hives in question, and on examining the latter a few days later the disease was seen to be rapidly developing in the combs. Several of these hives were in the worst possible condition; in one the bees had apparently been dead for months, while the combs it contained had evidently been robbed of the honey left in them after the stock had died out. Anyway, it was evident that none but robber bees had been in the hive for a long time past. This outbreak might easily be disastrous in a village where there are at least half a dozen small apiaries. I pointed this out and offered to assist in destroying the diseased stocks, but all to no purpose, though I have since heard that an abortive attempt was made in a rough and ready way to suffocate a few of them. Three weeks after, while I was ten miles away in another direction, I found that parties there were acting as agents in selling the appliances used upon these diseased stocks of bees through the season; though I was assured that the bees themselves were being destroyed.

Judge my surprise a little later when I saw the whole of the stocks included with other goods in a sale by public auction. I wrote the owner privately, making a final effort, and to prevent a serious wrong. The reply I received was that the bees could be cured if the necessary steps were taken. He also wrote, "How am I to know that those who buy these bees will not take the needful steps?" So the hives were sold, and though they hardly made

ERRATUM. — On page 55, first column, second line above case *C*, for "foul" stage, read "spore" stage.

firewood price, likely buyers were told that these hives of bees were "worth a pound a-piece." The person who bought the whole lot lives near the original owner, and I am informed that the hives were moved to the buyer's garden a little distance away. He knows nothing of bees, so there is a perfect hotbed of disease. Need I say more except to add that in a little time it was found in four of the other apiaries in the village before the close of the season.

(*P.*) Here was a case where the bee-keeper found one of his stocks dead in early spring, and, suspecting foul brood, he cut out and submitted a sample of the comb to a friend with some experience, and, finding his suspicions confirmed, dealt with the case thoroughly. Preventives were used in the other hives, and no more foul brood was seen in the apiary.

(*Q*) A lady bee-keeper, who has for some years found that sort of pleasure in bee-keeping that comes in the eventide of life, though there was foul brood in every hive she was not without some experience of the disease some years ago, but she never had the bees thoroughly overhauled as when I took them in hand.

(*R*) Here we came across what is (for this country) a large apiary added to more work in another line than the owner can do comfortably. When I had been at work among his bees for some time, he came, and after asking in what condition they were, he related the same story of buying the bees and the hives at a sale, with the inevitable result of want of knowledge. This is the third outbreak of foul brood clearly traceable to the sale and purchase of infected hives. Many sellers know that the bees are diseased; great want of care, no doubt, is also shown by the purchasers.

But all this proves how necessary it is that some sort of compulsory power should be possessed by which these evils could be stopped in order to make foul brood notifiable, and have diseased stocks properly dealt with.

(*S.*) Here was another bee-keeper who began on being told that bee-keeping was "little or no trouble." He was also induced to buy a second-hand hive from a person who tried his hand and failed in the craft. A swarm was put in the empty hive, and was soon in a bad state with foul brood. Being advised to "burn the lot," he burnt part, but the most important items were preserved, and tucked away under the garden hedge. As a matter of course, the bees from his own healthy stock soon found out the "tucked-away" things, and later on, when I saw this healthy stock, it was foul with disease.

(*T.*) Is an artisan bee keeper, who cares nothing about bees, but says "The children like a bit of honey." He had three stocked hives given him a few years ago, and since that time in some winters half his stocks have died. When this occurs the empty hives have been left outside, decoying thus other people's swarms to them in spring. Last year he had only two stocks, both in frame hives set up close together. One of them (in a very old hive) was badly diseased, and the other healthy. I left him a leaflet (No. 32) on foul-brood, and gave him a day or two to think it over; I afterwards made a special journey and burnt the lot.

(*U.*) Here I found a stock in a nearly new hive, and although it was thought that something was wrong with the bees there was no attempt at examination till the stock was past cure. Then everything possible was done.

(*V.*) This bee-keeper, a man of intelligence and education, with previous experience of foul-brood, asked whether I did not think the disease was caused by damp!

I am afraid B.J. readers will tire of a subject that can never make pleasant reading, though it may to some extent be instructive, so I will leave it.—Wm. Loveday, *Hatfield Heath, Harlow, Essex.*

THE VALUE OF STRONG COLONIES.

[4705.] The more open mind of the average American gives him a considerable advantage (as we find to our cost) in the great markets of the world. This attitude our pushful cousin brings into every industry, and he seems to have no contempt for the novice. An employé of the once famous Alexandre, who was, I suppose, the premier manufacturer of harmoniums in the world, discovered that an organ-like tone could be got from a reed, but his employer would have none of it, and in consequence the invention was carried to America, and now we have the "American organ" everywhere, while the famous firm mentioned above has ceased to exist. This attitude of mind, no doubt, has led Mr. G. M. Doolittle to experiment with various sizes of brood-frames, and after all the years of testing he gave our friend Mr. Sladen to understand that he preferred the "Gallup" frame (11¼ in. by 11¼ in). But this frame might not be best on this side of the Atlantic. I say might not, seeing therefore that some doubt exists on the question. Why not put it to a test along with other sizes of frame? Since more prolific races of bees have been introduced into our midst, a larger brood-nest one would think is needed, or excessive swarming results unless the bee-keeper is always on the watch. I think, therefore, Mr. Sladen is right when he says, "any improvement in the dimensions of the British "Standard" frame that might be brought forward would certainly take the form of a larger frame. The general opinion in the country seems to be that it should be a deeper frame . . . . since the fewer and larger the combs there are the better it is for the bee-keeper in manipulating and the bees in brood-raising." We all aim at securing a permanent yearly average of profit from our bees, and to

be sure of this, we must follow Mr. Doolittle's advice, and "have a full force of working bees at *the right time*." But we are told this can be done with a small frame. I reply, Yes, but only by incessant manipulation and in robbing one stock in order to furnish another with brood. Now, if the same end can be obtained by having a more cube-shaped brood-nest instead of a long tunnel-shaped one the advantage is, to my mind, shared by bees and bee-keeper. An Irish bee-veteran in speaking of his remarkable success in the B.B.J., March 22, 1894, says :—"I disclaim all credit for my success, except that of providing room and material (he used the Langstroth frame) for the bees to work upon, as I have neither fed, nor stimulated, nor re-queened, nor done anything to promote greater activity among my bees."

Will some one who has used a larger frame for a number of years give us the benefit of their experience?—J. D., *Pendle Forest, February* 21.

SIZE OF FRAMES.

[4706.] Having read with much interest the discussion on size of frames, and the mention in our Editor's "Useful Hints" on page 71 last week, I should like to give my experience for what it is worth. I cannot call myself a beginner, having kept bees for sixteen years. I also commenced by making five hives to take larger frames than the "Standard"—they were about "Langstroth" size (see page 71) —which I copied from those of a bee-keeping friend ; and after reading up some old numbers of the *B.K. Record*, I was inclined—as our Editor says, "anxious to go one better"—by adopting frames of the "Standard" size, to accommodate which I made about twenty hives. Fortunately, however, I kept my five old hives, and every year found them to more than hold their own against my new "Standard" frames. About ten years ago I made another "retrograde step," this time a modification of my first and 16 in. by 10 in. size ; and I am now convinced this size is more suited for honey-production in this district than the "Standard."

I do not think it makes much difference what size frame is used when working for extracted honey, if we dispense with excluder zinc ; but with a good queen such as "J. G." mentions in his letter on "The Value of Strong Colonies," on page 77, and a cramped brood-nest, the thing is different. How can we secure the best results from a good queen if we have, say, only two-thirds of the cell-room she is capable of filling with eggs ? When "J. G." quoted Mr. Gallup—referring to a swarm in half barrel—I understand that to mean an unlimited brood-nest with unlimited scope for egg-laying, and that is just my idea in advocating a larger brood frame. I fancy your other correspondent, "J. G." (4698, page 76) had not his good queen when he found his bees storing in brood boxes and not in supers. Anyway, let me say at once I am not troubled in that direction ; when the queen is right and honey coming in, bees always "go up" with a rush. "J. G." also mentions keeping brown bees, but who at the present day has got a pure strain of brown bees ? I think our editors have said more than once that very few bees in this country are free from a trace of foreign blood.

I am very pleased to see that your able correspondent, Mr. Sladen, is experimenting with frames, and shall be on the look-out for results. The top bars I use are ⅞ square, and I have often wondered if they would do a little wider. I hope, however, that bee-keepers who have had practical experience with different sized frames will give their views. It is not for any one who has never tried any other size than "Standard" to say that is "best" because they happen to be satisfied with it. I am fully convinced of the advantage of a frame of uniform size for general use, but the one now adopted is too small for best results in this district. I find with using twelve or fourteen "Standard" frames in brood-nests I do not get as good results as with nine or ten frames of the larger size ; there always seems more power in the latter when honey begins to come in. In conclusion, I have still thirteen "Standard" frame hives, including one "Wells," or double-queen hive, to compare with those holding the 16 in. by 10 in. frames.—PHIL. JONES, *Rose Gardens Apiary, Church Stretton, February* 24.

SOME NOTES ON BEES, HIVES, AND FRAMES.

[4707.] The past winter in this district has been a cold and dull one, so that the bees have not flown much. This may prove beneficial later on, through not wearing the old bees out, and thus helping to give stocks a good start at brood-rearing in the early spring. The bees of one stock I discovered on December 1 to be restless and humming a good deal, which made me conclude that they were queenless. I happened to have two nuclei wintering in a "W.B.C." hive, with a perforated dummy between, so one queen was removed and given to the queenless hive. I at the same time removed the perforated dummy which had separated the two nuclei, and thus both lots, now united, will make a good stock. My stocks at the time of writing seem all right, but, of course, we are not quite through the winter yet. My Carniolans, generally, seem very bad-tempered when swarming, and I would like to know whether this is usual with this race of bees, because at other times they are very quiet, and can be handled without the use of either smoker or veil. The Carniolan bee has, in my opinion, some very good qualities. I believe the queens are more prolific than our natives, and

I have certainly had much larger swarms from the Carniolans than from blacks.

I note in the B.B.J. recently some correspondence on the subject of larger frames than our present "Standard" frame. For my part, I believe that any alteration in this respect would be a great mistake. Apart from other reasons, we should require to use deeper brood-chambers, &c., which would cost much more, as 11-in. board costs more in proportion than the ordinary 9-in. stuff, and is rather difficult to obtain free from shakes, &c. Those who prefer more than ten frames in the brood-nest can easily make new hives to hold as many as they desire, or they could use a shallow-frame chamber either above or below the broodnest. This would give a broodnest equal to the laying capacity of the most prolific queen.

I have this past season given the "Wells" hive a good trial, and found it fairly satisfactory; but with me it does not give more surplus-honey than two ordinary stocks. I have six more ready for the coming season, and hope to give this system a good trial. I have also just finished making up six non-swarming "W.B.C." hives, which I shall give a trial in the coming season; also three ordinary "W.B.C." hives. These are all fitted with Mr. Walton's floorboard feeder. This, I think, is a good idea to save time, as it is not necessary to remove roofs, quilts, &c., in feeding.—H. S., *Churchdown, near Cheltenham, February* 19.

QUEEN BREEDING BY SELECTION.

[4708.] Referring to the letter of Rev. W. Head (4690, page 66), it appears that some misapprehension, or otherwise a wrong impression has got abroad with regard to my remarks on "Queen-breeding by Selection." It may tend to make the matter clear if I refer your correspondent to my letter, from which he quotes (4111, p. 420, vol. xxviii.); he will there find that all my stocks are not located in single hives. In order, therefore, to prevent any further misunderstanding, let me say my apiary consists of three separate divisions, each worked for a separate object. The system adopted in one division cannot possibly be applied to the other. Each must be treated to meet the object in view.

The "W.B.C." division, which contains only hives of that particular type, is worked for section-honey from the heather bloom—the only source of saleable honey this district produces. In my "Wells" division—*i.e.*, the one containing double-queened stocks only—each queen is confined on ten brood-frames always. These "Wells" hives are not worked for honey in the same form, and for obvious reasons must receive totally different treatment. When I tell you that those ten "Wells" hives (containing twenty of the best queens I can produce) have never given me a single swarm for eight successive seasons, the most sceptical must admit there is something here in the shape of a definite practical result. The question is, What is it? With this explanation I think my letter will be more clearly understood than the remarks of your correspondent appear to convey.—J. RYMER, *Levisham, Yorks, February* 19.

Queries and Replies.

[2799.] *Number of Frames for a "W.B.C." Hive.—When to Give Supers.*—During these winter months I have been making a "W.B.C." hive from dimensions taken from an old BEE JOURNAL, and should be obliged if you would give me the following information through your paper:—1. What do you consider the best number of frames to work in the shallow-frame boxes sent out with the "W.B.C." hive? Some manufacturers show ten in their catalogues. 2. Providing that stocks of bees are strong in numbers by the first week in June, should the shallow-frame boxes be put on then, or is it best to wait until the honey is actually coming in? I may say this makes the second time I have started an apiary, owing to my having to leave the country, and as my first experience was not altogether successful, I wish to be in a position to start well this year. My bees have, so far, wintered well, and to-day turned out in large numbers for a cleansing flight. Thanking you in anticipation of your help in this matter.—H. W. FORD, *Suffolk, February* 21.

REPLY.—1. Our preference is for ten Standard frames and a dummy in each hive. In dealing with some races of bees it will, no doubt, be useful to use eleven frames, especially if the district is an early one for bee-forage, but, as a rule, ten frames in the hands of a skilful bee-man are, in our opinion, "the best number" for the brood-nest, and, this being so, it follows that ten frames must go in the shallow-frame box for surplus, seeing that body-box and surplus-chamber must be made to fit over each other *flush* on all sides. 2. The time for putting on surplus-chambers cannot be fixed by rule-of-thumb, but is timed by, first, the strength of the colony; second, the bee-forage in the district; and, third, by the weather at the time. In other words, if the bees cover all frames in lower-chamber, and the bee-forage is yielding nectar, with suitable weather to gather it in, the combs, as seen just below the quilts, will show whitened edges caused by the bees lengthening out the cells; and, when this is seen, no time should be lost in giving supers.

[2800.] *Removing Bees 100 Yards.*—1. Referring to your reply to my query last week (2797, page 79) on moving bees 100 yards, am I to understand that I can move my bees to my new residence at once? The qualifying word, "but," raised a doubt in my mind, hence my again troubling you on the matter. I may add that yesterday I examined all my

stocks, and found them (with one exception) very strong. The weak one, however, had only sufficient bees left to cover about two frames. I suspected queenlessness, but eventually found her. 2. The last-named colony was a swarm of June, 1900, from which I took 70 lb. surplus honey, and last year I got from the same hive 95 lb., and as there was no swarm, would it be wise to try her another season? These bees have been flying rather strongly on two or three fine days recently.—J. CHARLTON.

REPLY.—It will make the reply clearer if we say, but for the fact that the distance (100 yds.) to the new location is so short, the hives might be removed at once. On the other hand, if cold weather keeps the bees indoors for two or three weeks at one spell, the hives may be moved on the expiration of that time if the precautions mentioned on p. 79 are adopted. 2. On no account would we retain the queen. She is evidently worn out; hence the weakness of the colony.

Echoes from the Hives.

Honey Cott., near Weston, Leamington, February 22.—After a long and severe frost, during which we had on some nights a temperature of 19 deg. Fahr., the weather has changed; it is from 38 to 40 deg., or higher to-day, with promise of much milder weather, and bees are rather busy carrying out their dead comrades along with the usual débris. Fortunately, we have had but little snow in this locality. Snow-drops are peeping out.—JOHN WALTON.

Chichester, February 24.—At last we seem to be in for the "February fill-dyke" after a week of hard frost. Up to now we have been free from snow this side of the Southdowns. Saturday morning last was very mild, and the bees turned out of hives with a joyful sound. Speaking of sound, brings one's thoughts to, Can bees hear? Of course, they can, or why did our grandparents run after the swarms and kick up such a din with the fire-shovel and front door key, if they could not hear? But joking aside, Messrs. Editors, could you not give us bee-keepers a list of the colour of honey in relation to the source it is gathered from? For instance, we have white clover honey, which bears a white flower, this being very light honey; also hawthorn, lime blossom honey, with more colouring in the flower contains more colouring in the honey, and so on, till we come to heather, which has a large amount of colouring in the blossom, as also in the honey. Does this agree to other honey-producing plants not mentioned? If not, why not?—JOHN DANIELS.

Woodbines Apiary, St. Brelades, Jersey, C.I., February 24.—After a somewhat long spell of east winds, with sharp snatches of frost, keener than what we usually get here, a very desirable change has now taken place, and marvellous results have been produced in twenty-four hours, coupled with a few hours of bright sunshine. The skylarks have carolled forth their sweetest songs; the magpies have followed in the furrow of the plough of the new potato planter; whilst the bees in thousands have been released from their hibernation, and have made the apiary hum like a top, to the delight of the anxious keeper, who always wants to know how many have passed through in safety the late wintry weather. I am thankful to say mine have all turned out strong and well, free from disease, with every prospect so far of success. Best wishes to all concerned, and continued prosperity to the B.B.J.—WILLIAM W. KAY.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

A. L. GRIMSHAW (Ashton-on-Mersey).—*Sugar for Bee Food.*—If your grocer guarantees the sample sent to be pure cane-sugar, it will do very well for bee-food.

S. DARLINGTON (Charing).—*Caterpillars in Hives.*—1. We cannot say what insect the caterpillar sent would develop into, but it certainly is not (as you suppose) the larva of wax moth. 2. Mr. H. W. Brice, 100, Brigstock-road, Thornton Heath, is Hon. Secretary of the Kent and Sussex B.K.A.

G. GELDARD (Liverpool).—*Making Bee-Candy.*—1. Both samples are fairly good in grain, but they are too hard; evidently from over-boiling. If the instructions in "Guide Book" are closely followed, a soft, smooth-grained candy will result. Your other queries will be replied to in our next.

*** Mr. W. H. Marlow writes as follows:—"Referring to lantern-slides, in your issue of February 20, Mr. D. Mappin, in his 'Echo' (p. 80) asks if a lantern-slide can be procured showing bee gathering nectar from the flower. I do not know of such a slide, but there is an illustrated article in *Harmsworth's Magazine* for October, 1900, and one of the illustrations shows the bee gathering nectar and fertilising the flower at the same time. Perhaps this may meet the requirements of D. Mappin. If so, there is no doubt that permission could be obtained to copy the pictures for the purpose of making slides.

"P.S.—I have no objection to lending copy of the magazine if it cannot be obtained, and the subject is thought suitable."

*** *A number of interesting letters, &c., in type are unavoidably held over; among them Articles on "Comments on Current Topics"; "Can Bees Hear?" by Colonel Walker; "The Products of the Bee"; "Bee-keeping in Natal," and several Queries—all of which will appear in our next.*

Editorial, Notices, &c.

LANCASHIRE B.K.A.

ANNUAL MEETING.

Held at the Preston Scientific Society's Rooms, Fishergate, Preston, Saturday, February 22, 1902. Mr. George Roberts, Liverpool, in the chair. There were also present, Messrs. George Rose, A. M. Fielding, J. F. Williamson, W. A. Cook, Robert Rymer, W. H. Johnston, F. H. Taylor, J. E. Andwich, W. Lloyd, J. Jones, P. Shackleton, and many others from various parts of the county. The minutes of the last annual meeting having been read and confirmed the chairman moved the adoption of the report and balance-sheet, which was seconded by Mr. Rose, and carried unanimously. Votes of thanks to the officers and committee were passed and responded to by Messrs. F. H. Taylor and George Rose.

The election of President was left in the hands of the committee.

The following gentlemen were elected Vice-Presidents :—Lord Lilford, Sir J. T. Hebbon, Sir Daniel Radcliffe, Sir George A. Pilkington, Rev. Canon Blundell, Messrs. F. Stapleton-Bretherton, W. Talbot Bretherton. W. Fitzherbert Brockholes, Wm. Carr, W. E. Tomlinson, W. Tyrer, Rev. L. C. Wood, T. T. L. Scarisbrick, R. R. Rothwell, George Roberts, Rev. Dr. Porter, Sir Alfred Jones. Hon. treasurer and hon. librarian, Mr. Frederick H. Taylor, Fallowfield, Manchester. Hon, auditor, Mr. Alfred Wood. Committee :—Messrs. Tyrer, Rose, George Roberts, A. M. Fielding, J. H. Walmsley, W. Lloyd, Luke Collinge, P. Shackleton, Dr. Anderton, R. Rymer.

The question of appointing a paid secretary was left in the hands of the committee.

Mr. Fredk. H. Taylor was reappointed lecturer to the association.

A general discussion then took place on various matters connected with the welfare of the Lancs B.K.A., after which the members adjourned for tea. In the evening a social meeting was held, when microscopic objects relating to bee-life were exhibited by Mr. F. H. Taylor, and curious nests of wasps and wild bees by Mr. Heathcote.

A committee meeting was held, at which Mr. Tyrer was appointed chairman, and Mr. George Rose vice-chairman.

YORK AND DISTRICT B.K.A.

This Association held its annual general meeting at the Church Institute, York, on Saturday, February 22, when a large number of members was present.

The Rev. Sidney Smith, M.A., occupied the chair. The committee's annual report was presented by the secretary, and contained the following interesting references to the work of the Association :—

The committee have pleasure in reporting a membership of ninety-four, as against sixty-seven a year ago.

The *Bee-keepers' Record* has been distributed month by month to all the working members of the Association. A large proportion of the members have received a visit from a certificated expert of the Association, and on July 3 a bee demonstration was given by the chairman (the Rev. Sidney Smith) at Wheldrake Rectory, which was well attended and much appreciated.

The committee have during the year undertaken the honey classes at Fulford, Haxby, and Acomb Agricultural and Horticultural Shows, and subsidised the honey class at the York Fat Stock Show.

Accounts of the funds of the Association for 1901, submitted with this report, showing a balance in hand of £1 15s. 5d.

The adoption of the report was followed by the election of officers, Lord Wenlock being re-elected President, with the following ladies and gentlemen as Vice-Presidents :—The Hon. L. de Yarburgh-Bateson, Miss Lucy Bethell, Mrs. Oliver, Lord Deramore, the Rev. A. T. Field, Captain M. D. Jefferson, Captain W. H. Key, Major Sutton Lowe, G. Hotham Newton, Esq., J. H. Preston, Esq., R. Richardson, Esq., Viscount St. Vincent, G. Whitehead, Esq., and W. Bentley, Esq.

The committee, as now elected, comprises Rev. Sidney Smith (chairman), Rev. J. R. Bradshaw, Messrs. Dunn, Goode, Jemeison, and Midgeley. Mr. F. A. Pay was re-elected as secretary, and also appointed treasurer, *vice* Major Sutton-Lowe, who is going to Africa.

The meeting paid a warm tribute of appreciation of the energy and kindness of the chairman, and special expressions of thanks were tendered to him for the delightful afternoon's outing at Wheldrake Rectory. The Association is undoubtedly doing a useful work, and is yearly becoming more and more popular in the district.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

COMMENTS ON CURRENT TOPICS.

[4709.] *Gorse or Whin.*—Just lately, in the very middle of winter and immediately after a heavy snowstorm had cleared off, several bushes of this hardy plant showed a considerable number of blooms at an

altitude of 1,500 ft. above sea level. This shows that if the gorse, or whin, is not actually a perpetual bloomer, as the proverb declares, it is at least amongst the hardiest of flowers. It is recorded that Linnæus saw the furze in bloom for the first time when he was well on in years, and the grandeur of the sight affected him so much that he knelt down and offered up his grateful thanks for the glorious vision. The picture is touching, but I refer to the plant now chiefly to say that I cannot credit it with being such a source of honey as many bee-men maintain. The "gorse of golden hue, with heavy perfume round it shed," does not give anything like an appreciable quantity of honey. It yields an abundant supply of pollen, and bees frequent it much at times, but my observation leads me to say that nine out of every ten visiting it do so for its pollen alone. I am inclined to take much the same estimate of "broom" as a honey plant. I saw in the *Scotsman* once a report of a bountiful return of broom honey, written by some one in the county of Fife, but I fear the source at least is a mythical one. I make the statement fully conscious of the fact that almost all single flowers yield at least some nectar which, if sucked up by bees, is converted into honey. But that either the whin or the broom gives a copious or bountiful flow under even the most favourable circumstances is more than I am prepared to admit.

I have to return my grateful thanks to Mr. Shorthouse for the very interesting information he supplies (4679), in answer to my query *re* poison plants. The subject deserves further reference at some future time.

Fertile Queens to Swarmed Stocks.—An interregnum takes place during which no eggs are laid, lasting at times two or three weeks, when bees swarm. Even when the bees are returned minus their queen, with the object of checking swarming, valuable time is lost, and the force of workers much reduced during this interval. When young fertile queens are on hand it saves this loss in time and numbers if one of these is given to the stock with the returning swarm, first destroying all queen-cells. Moreover, it frequently checks all further preparations for swarming, eliminating all desire for raising young queens. The bees intuitively perceive that they have attained the desire of their heart and appreciate the end attained as much as if it were the consummation of their own efforts. It may be a moot point whether it would be best to delay the introduction of the alien queen for twenty-four or double that number of hours.

Amateur Carpentry.—At this season of the year, when bee-keeping, properly so-called, is at a standstill, it adds largely to the pleasure and profit derived from the pursuit if all take a turn at this pleasing pastime who can handle tools, as it adds a new charm to the hobby. A man who sees hives of his own construction adorning his bee-garden has a new interest in the business. Racks, lifts, and a number of small necessities are at his command when required. With saw, plane, and hammer, many happy hours can be passed, which tend to sweeten life, as the exercise braces up the nerves. Especially is this the case with those who lead a sedentary life. The exercise should prove invigorating, and help in giving added health and strength.

Profits!—Yes, the labourer is worthy of his hire, and it is by no means taking a low or sordid view of our hobby to say that it should be made to pay. The man who does not strive to make (bee) income more than balance expenditure, giving a margin of profit at the end of the year, is not a successful bee-keeper but a faddist, who will most likely soon disappear from the ranks. Every pursuit, even a hobby, should be founded on a sound business basis.

Strong Colonies.—The excellent advice we got lately from America deserves to be hung up in the most prominent position in every bee-shed and manipulating house. But I must demur if it is pretended that it is anything new now discovered. In my humble way I have lately, again and again, urged the very same point. But, further, it has been the "watchword" of both our B.B.J. and *Record* for many years, as a hundred extracts could show were it necessary. Here is what that prince of bee-keepers, Mr. Cowan, says in the "Guide Book" (page 108) :—"The great secret of successful bee-keeping lies in having strong colonies always ready to gather surplus *whenever a good honey-flow comes.*" Mr. Doolittle simply subscribes to the above doctrine. So will every true bee-man. But how to get every colony in the apiary into the pink of condition at the right time is not so easy a feat as many would lead us to believe. I think I gave all my hives about the same care and attention last year, yet my strongest gave me four times the amount of surplus supplied by my weakest. Why? The man who solves that problem may become a millionaire.

Heavy Honey Imports.—Nearly £15,000 of foreign honey was landed on our shores during the month of July. There is still a field for the home product it would seem.—D. M. M., *Banff.*

CAN BEES HEAR?

[4710.] It is to be hoped that your correspondent Mr. Sladen (who writes on page 61), will be encouraged to persevere in his efforts to determine the full use of Nassanoff's organ in the honey-bee. It cannot well be held to compete with the sense of hearing as an agent of communication outside the hive, since various sounds produced by bees can be heard at a considerable distance, whereas the slight odour diffused by the glands in question might be wafted away in any current of air, and would then be of use in a particular direction only.

There are good reasons for believing that

bees can hear, and the same may be said of all insects that have the power of emitting sounds apart from those produced in locomotion. Such sounds are sometimes sexual, as in the locust and cricket families, where the males have special organs for producing their rasping or chirping calls, and both sexes are provided with organs of hearing, situated, as entomologists tell us, in their forelegs—"small depressions or pits on opposite sides of each tibia, with a thin membrane stretched across the bottom of each depression." In the case of the hive-bee sexual calls are not needed: one would look rather for emotional sounds from members of a large community. And these there are in plenty, from the plaintive "let me out" of a bee in the folds of a handkerchief to the fine, full harmony of a swarm. To quote the well-chosen words of Maeterlinck and his translator, the bees have "a whole gamut of sounds that we can distinguish, ranging from profound delight to menace, distress, and anger; they have the ode of the queen, the songs of abundance, the psalms of grief, and, lastly, the long and mysterious war-cries the adolescent princesses send forth."

I do not look on the so-called "piping" of the imprisoned queens as war cries, for if they were we should hear them sounded by the princesses later on when wandering about the hive, whereas neither then nor when engaged in fighting do queens of any age give forth a sound. What, then, are they? Huber attributed them to a device of Nature to enable the workers to distinguish the ages of the prisoners, so that they could be liberated in due succession. Modern reasoning will hardly support this suggestion. I am convinced that the cries represent the impatience of young creatures full of life and anxious to enjoy it, and, above all things, *hungry*. It should be remembered that from the time the larva stretched itself out to undergo its transformation in stillness, and during the period of nymph-hood, no food could be administered. Doubtless it was not then needed, but, together with fresh life and movement, would come the natural cravings of the perfect insect. How keen these are is manifest when the young worker, hardly out of its cell, extends its tongue for food or hastens to a neighbouring cell for its first long draught of honey. But the young queen, hungrier still in proportion to her size and vigour, finds herself foodless and hemmed in by the tough silk netting that she wove in a former state, so tough that it will cost the workers many a bite and many a strong pull before they can tear away the hinge of the cap, by lifting which she will have escaped from the cell. How long it may take her to realise the position, and how much longer to work her little tongue through the webbing we cannot say; but what wonder that in her hungry impatience she should clamour for food? I will not now put forward as an "observation" what comes to me as an afterthought, but I well remember that when there were so many captive princesses in my observatory hive, as recently described, their outcries were forcible and continuous when they were first coming into life, and that later on, while many were still in confinement, but being regularly fed, the piping was intermittent and less noticeable. It is probable that when only one fresh queen is raised there would be no piping at all.

Sounds uttered by queens at any period after emerging may be attributed to impatience and fear under bodily restraint, and sometimes, perhaps, to jealousy. According to Huber, a young queen can produce a sound on hearing which the workers bow their heads and remain motionless, while she herself advances on the cells that contain possible rivals, with intent to destroy them. No subsequent observer has confirmed this, and it is just possible that for once he may have been misled. He does not attempt to describe the sound.

It was lately stated in this journal that a queen will "pipe" on being shaken from a frame. This I have never heard, but during manipulation I have heard sounds very like "piping" that must have been produced by workers. It will be admitted, at any rate, that the sounds produced by hive-bees are numerous and peculiar, and the question now to be considered is, What grounds are there for believing that the bees can hear them? Practical bee-keepers can give many reasons for such a belief, but I should prefer to answer the question on broader grounds. Nature, prodigal as in many ways she may seem to be, does not specialise for nothing. The locusts and grasshoppers call to far-away lady loves from the leafy recesses of trees or from forests of grass stems. I do not want to be shown their organs of hearing. I am sure that they can hear. I cannot point out any special organ of hearing in the hive-bee, but I *know* that it would not have been endowed with spiracles admirably devised for the production of emotional sounds of varying tone and intensity had the power thus acquired not been valuable to the insect; and of what possible use could it be, were not the fellow-members of the community capable of hearing these sounds and appreciating them?

What concerns us is not whether bees can hear, but whether they can hear the sounds that bees make. Fiddles have been played at hive doors in vain; loud and violent language has been hurled at the inmates, and they have remained unmoved. Haply their "receivers" are not attuned to such noises, or, like human beings, they hear, but do not heed. The country-side rings with sounds, some of which we cannot hear, while of many, although we hear them, we are unconscious; if more than a small fraction of the noises that constitute the uproar of big cities were to be registered on the brains of the inhabitants life would be intolerable.

It has been shown that Huber was persuaded that bees can hear. In his private correspondence published not long ago there are passages relating to the harmony of swarming, of which I hope shortly to be able to supply a translation.—H. J. O. WALKER (Lieutenant-Colonel), *Leeford, Budleigh-Salterton.*

THE PRODUCTS OF THE BEE

AND THE USES THEREOF.

(Offered as a suggestion.)

[4711.] As a constant and enthusiastic reader of your weekly paper, I have invariably noticed that whereas many contribute articles on bees, diseases, appliances, &c., all of which papers must be vastly interesting both to the elementary bee-keeper and others. But, so far I have seen very little practical matter has been written on the subject named in the above heading; with the exception perhaps that honey is recognised by all growers to be a highly nutritious and most acceptable addition to the table, and that beeswax when mixed with turpentine and elbow-grease is a downright good thing for polishing. I have, therefore, no hesitation in suggesting that it might be worthy of consideration if the JOURNAL were to invite its readers to contribute practical formulæ for preparations in which beeswax or honey are largely contained, or in which either is an important and necessary constituent; and if it should be that the subject met with the enthusiasm which I think likely, perhaps, Sir, you may see your way to offer a prize for the recipe most worthy of merit.

By so doing I think we should all find that (1) honey and beeswax have more uses (household) than the majority of bee-keepers imagine; (2) we should interest ourselves in the compiling of these published formulæ, realise their values, and adopt them; (3) it would be an inducement for our lady members to step forward with methods for the production of dainty dishes; (4) we should be making use of and enjoying the products of the bee under the most advantageous conditions; (5) and finally, it would throw open such a field for experiment that some enthusiastic research might introduce a sweetmeat, or what not, of such marvellous therapeutic properties that would, perhaps, speedily annihilate "Cureall's Balsamic Cough Candy," and establish for itself a reputation hitherto unheard of.

At present, under the heading of "Gleanings from Foreign Journals"—by Mr. Hamlyn-Harris—we have from time to time a few specimens of these so-called formulæ, many of which, to my mind, do far more credit to the expansive imaginative powers of the several writers than to their practical experience with bee-products. These must, therefore, necessarily prove intensely disappointing to anyone attempting their preparation, and constitute an additional reason why many published formulæ should be left unread. This being so, I would suggest that the Editors should inaugurate a monthly or quarterly competition, and specify an article, the principal ingredient of which must be honey or beeswax, and receive from competitors (under certain conditions) a sample of the article, together with the formula from which it was prepared, and having had the same duly criticised by some one capable of judging, announce the results in the following issue of the JOURNAL.

This method, I may add, has been successfully carried out by other journals to encourage perfection in the particular industry represented, and it goes without saying that it affords an extra reason why we should make ourselves more familiar with the contents of our JOURNAL.—H. S. SHORTHOUSE, M.P.S., F.C.S., *Birmingham, February* 20.

THE "RYMER" HONEY-PRESS.

[4712.] It will probably be fresh in the minds of your readers that some rather disparaging remarks regarding myself were made in the BEE JOURNAL of June 20, 1901 (page 242), and in fairness and justice to me, I now think it right that your readers should know the sequel to this matter, which is as follows: The writer of the letter in question then was, and is now, the "Sole agent of the Pickering Bee Farm," and you may guess my surprise two months after the letter appeared to find an order for a dozen small presses had been given to an agricultural implement maker at Malton. These presses were said to be required for pressing "sections," and in a short time afterwards two of those new 8 in. by 10 in. presses (an exact model of the old press) were standing in front of the agent's residence for sale under the name of the "Pickering Bee-Farm Press." Let me here say this new press does not in any way resemble my own in either size or working. I had expected that this stepping into the "dead man's shoes" talked about would have brought your correspondent forward again with renewed vigour; but no, perhaps it makes a difference when a person is "sole agent" for this second invasion. What we are to think of a critic like this it is beyond me to say, so I leave your readers to draw their own conclusions. I content myself by simply stating the above facts.—J. RYMER, *Levisham, Yorks.*

BEE-KEEPING IN NATAL.

MY FIRST SWARM.

[4713] My first hives had been placed for me, under a flat-crowned mimosa tree among the bananas, where I paid them short, fearful visits, from time to time, obtaining honey but no bees. Doubtless they had swarmed many times during the hot summer days, when the

sun-mist lay on the hills and the humans stayed indoors because of the heat. There was no one to see where they flew over the miles of grass and bushland on hill and valley that lay around them. In every instance they had gone off unobserved (though there was one swarm at the Kaffir store at the foot of the hill I always regarded as a lost possession) until one sunny afternoon in December (midsummer here) a swarm arrived and came inside. Almost before we knew what was happening they hurried pell-mell under the floor of the passage, through an opening the white ants had made in the skirting. A few odd bees had been hunting about the place all the morning, but I had paid no heed, beyond wondering in a vague way what they are doing. It was interesting to speculate from whence they had come, but the main question now they were in was how were they to be got out again? That evening I smoked them till my eyes ached, rousing them furiously, but to no end. Next day I tried again, but though a few hundreds came out the majority remained. For a day or two they went happily out and in. Meantime I sought assistance. One friend agreed with me, bees were delightful—especially seen *through a field-glass!* He would not mind handling them himself if he was sure they would not *bite!*

I thought of a neighbour next—a kindly, well-disposed man—who not unlikely might help. We talked, to begin with, about things in general. He was a great talker and rattled along merrily about market prices, fowl sickness, and the failure of the mangel crop, but at the first word on bees he instantly shied. Somewhat disheartened, I mentioned the matter to another friend. "Bees!" he exclaimed; he had a great liking for bees; they had always been a fancy of his; and so on, giving me the impression that here was an exceptional man, whose arrival was most opportune. Alas! On bees in general he was eloquent, but when it came to these particular bees he assured me I must not interfere with them on any account. I concluded it was honey he liked and bees he knew nothing about. I knew it was common up-country to have bees under the floor and remove a flooring board when in search of honey, but these boards were 20 ft. long and could not be removed; besides, the method was decidedly too primitive in these days of movable bar-frames with metal ends.

There was an advertisement in the newspaper that week, offering a swarm of bees for sale, almost the first time, too, for three years. No, I would not give in, and buy bees when these bees were there, and again I listened helplessly to their ceaseless pattering underneath. Experienced bee-keepers will doubtless smile and mutter, "What a fuss; bees swarming don't sting!" &c., &c. And yet away back in the recesses of their memory there may be records of a time when they were equally courageous.

In the text-books on bees there were chapters and chapters about hiving swarms—always how to get them down, never, by any chance, how to get them up. Of what use was a ladder or a garden hose when the bees were under one's feet? Mr. Root advised enticing swarms with a frame of brood. Mr. Cowan, in changing bees from one hive to another, advised "rapping." Armed with a frame of brood and a wooden mallet, I set to work. Rap, rap, tap, tap, tap—till the echoes rang in the long hollow floor. A few bees hurried up to see what was happening, a few more to remonstrate, a crowd to declare it was insufferable, more and more till the passage buzzed like the inside of a hive. At first they clustered on the window, finally, amid great commotion, on the basket containing the frame of brood. Hopeful the queen was amongst them, I carried all to a hive (which had been set up on glass foundations safe from ants), put the frame inside, and emptied the bees on a white board in front of the hive. They straightened themselves out, and there, in the centre of a little cluster, was the queen. They were raising her up, it seemed, and then, very slowly and gracefully, she walked over the layer of bees towards the entrance of the hive. No sooner was she within than they followed quickly in good order, like a regiment of soldiers, with a strange, joyous sound, as though delighted with their new home under the loquat trees.—MARY RITCHIE, *Trevose, Bellair, Natal, January* 21.

DISTRICT B.K. ASSOCIATIONS.

[4714.] I am pleased to see a further communication from Mr. F. Tilley on page 58. It is a fact that his corner of Worcestershire has not had all the attention it might have had from the County Association. This deficiency is one of those which usually crop up on the adoption of a new system; it was under consideration before Mr. Tilley's former letter appeared, and will probably soon be made good. Our expert, however, paid many visits to members in and around Bournville last season, and any reader of the B.B.J. could, through it, without trouble, have obtained all information regarding our work. No doubt, our local secretary would be pleased to attend the proposed meeting at Bournville, and I should like to do so myself, if we may. I agree most cordially with every part of "B. Mad's" letter (on page 35), which Mr. Tilley considers a "fitting reply" to my remarks. This states emphatically that a District Association would, "of course, affiliate with the County B.K.A." I am asked why the names of non-members of associations preponderate in the list of those accepting the insurance scheme. Personally, I think the reason is that so large a proportion of the country is outside the existing associations; also, pro-

bably the matter is being held over in many counties until the annual meetings. If the question is meant to imply that the officials of the W.B K.A. have been remiss in supporting the scheme, I may state that the B.B.K.A. form was posted to every member, together with a circular from myself asking for the favourable consideration of the scheme and the return of the signed forms. The insurance scheme was also brought up for discussion at our annual meeting. It is no wonder that Mr. Tilley should pause before asking such an amazing question as whether a county association is working in connection with the B.B.K.A. Surely, a reply is not needed. In answer to the other query, the W.B.K.A. does not work "in connection" with the Worcestershire County Council, but co-operates with it in different ways, and seven of our experts are employed by the County Council as local instructors in bee-keeping.

I trust that a strong district association may soon be formed at Bournville, and that it will not, by remaining unaffiliated with the W.B.K.A., show its disregard for Mr. Tilley's excellent maxim "Union is strength."—JOHN P. PHILLIPS (Hon. Sec., Worcestershire B.K.A.), *Spetchley, Worcester, February* 10.

"DECOY HIVES" FOR OUT APIARIES.

[4715.] I note Mr. Hulance's report of his "Bee-doings for 1901" (4070, page 78). He mentions the use of "decoy hives" in the apiary and rather disparages the practice, but I consider it the "safety-valve" of an out-apiary. I omitted to make mention of this fact in my report on the subject of managing an out-apiary, but I have used "decoy hives" ever since 1890, when I first started this branch of bee-keeping. I shall never forget the sight of the white clover fields (consisting of about forty acres), one on either side of the road, and I look back on that as an ideal spot for a plenteous honey gathering. The clover was being left for seed, and one could not walk without crushing the blooms by dozens. I also knew there was not an apiary within two miles of this splendid forage-ground. My bee-keeping neighbour, who was my companion at the time, fortunately had a friend in the occupier of the fields adjoining the forty acres mentioned above, so I asked to be introduced. We found him at home, and after a little talk I got his ready consent to my bringing twenty hives of bees into the fields mentioned. I was that day on my way to a village (close to Cambridge) to fetch home some bees I had bought, but instead of taking the hives home, as intended, I deposited them in the garden adjoining the white clover fields. I then pushed on to Somersham, brought back another load of bees from my home apiary and four hives belonging to my neighbour, along with three empty makeshift hives, fitted with frames, as "decoys." I established that apiary and had the hives at work within twenty hours, and the bees were hard at work on the clover in less than as many minutes after being planted down on the new ground. When we had finished our work, and while partaking of a little refreshment, I walked to one part of the field and my neighbour to the other, and we both found there were bees galore all over the clover-bloom, thanking me, no doubt, for the "shift." I then fitted up the three "decoy" hives and left them. My neighbour was working three of his hives with shallow-frames and one with sections.

We did not see them again for a week, and, on arriving, the first thing my friend looked for was "some sections"; but the bees had swarmed! "Just my luck" he said, and was much depressed, but I told him to cheer up, and have a look at the "Decoys"; and there, sure enough, we found that a bouncing swarm had taken possession, and, being limited to eight frames, the bees were hanging outside for want of room and air. We moved the partly-filled sections from the parent hive and put them on the swarm with an additional frame in the brood-chamber. That swarm completed sixty-three 1-lb. sections the same season, and they were worth calling sections too! In fact, they took first prize on every show-bench where they were exhibited—in the cottager classes. This shows the usefulness of a "Decoy Hive" in an out-apiary. I could cite a dozen cases almost similar where swarms were caught. I never use them in my home apiary as I consider it very unfair to entice neighbour's bees, I only use them on the conditions stated above. Apologising, Mr. Editor, for taking your space in your valuable paper and wishing all brother bee-keepers a good honey.—RICHARD BROWN, *Flora Apiary, Somersham, Hunts.*

CAN BEES HEAR?

[4716.] Mr. Sladen's article on the above subject, in B.B.J. of February 13 (page 61), is a delightful contribution. I have intended to write on the same question for some time past, and now send a few lines for insertion, if of sufficient interest. But first, I would say, when Mr. Sladen's letter on "A New Scent Organ in the Bee" appeared in April last year (page 142) I became interested in "Nassanoff's Organ" referred to, and distinctly smelt the odour when examining a small swarm or cast in my sister's house, here in Dublin, in order to show my nephews and nieces the queen bee. I had the swarm in a skep, with cheese-cloth tied over the bottom. I carried the bees on my bicycle, and when I inverted it under a bright gaslight the bees began to mount the sides and fan, showing Nassanoff's organ, as described, and they gave off the odour, which, I was interested to notice, did not in the least resemble that of the poison of the sting.

As to the question, Do bees hear? In my Colorado experience, with a large apiary, I have brought a gun out among the hives and fired it at hawks and the king birds or bee martins, which were marauding too near my chickens and bees; this loud report did not cause the slightest stir among the bees. I have also sung at the top of my voice while working at the frames of an open hive, and the loud sounds seemed not to disturb them, nor did sudden calling to another person when so occupied; but digging with a spade or pick 6 in. or 1 ft. to one side of the hive brought the bees out in dozens at the hive entrance. This evidence tends to show that the bee is insensible to sounds, but the following tends the other way, and seems to prove that they are susceptible to some sounds.

When a swarm has settled on a bush or tree, instead of shaking the bees off into a hiving-skep directly from the branch; shake them on to a newspaper spread on the ground. Place a hive or empty box a foot or so from the mass of bees, with the near edge of it raised on two small stones. Tap or drum on the side close to them with a switch or the handle of your knife. Not only will they at once start towards the sound, but its continuance will quicken their travelling, fanning, and entrance. This is also the most thorough way of hiving swarms, scarce one bee being left to find its way back to the parent hive. I have so often used this plan of hiving swarms in my work in America, and never found it to fail. The noise immediately causes the bees of the swarm to start running in the right direction, fanning and showing "Nassanoff's" organ long before the first bee has entered the hive. I think that when bee-keepers who try this plan observe the prompt response to this sound, made as I have described, will be convinced bees do hear.—W. A. VARIAN, *Dublin*, *February* 22.

THE NERVES OF THE BEE.

[4717.] In all articulated insects the nervous system is pretty much the same, though it differs considerably in its degrees of perfection. Naturally there is a very marked contrast in many ways between such tiny creatures as most of the *Insecta* are, compared with the larger and more developed *Vertebrata*, but I think that in the former the nerve system is in its way as interesting, and, indeed, as perfect. The body of the bee is covered all over with an intricate network of radiating nerves branching out and ramifying from a series of centres to every part of the insect's body. These nerves are composed of bundles of tubular fibres surrounded by tissue which forms a sheath, whose duty it is to protect the delicate tubes. It will be remembered that the bodies of all articulated animals are made up of a number of segments, each of these formed of rings. The centre of the nervous system consists of a number of ganglia arranged in a chain along the central line of the body on the under side. We find one or more of these ganglia in each ring or segment all united by a double connecting cord.

In considering how these act, let me again refer to and amplify the illustration I used in treating the brain. We will consider that the Postmaster-General has profited by the late experience he has had in the breakdown of the telegraph system, and that he has laid down the contemplated new double trunk line of tubes, each containing a set of wires connecting the Metropolis, say, with Birmingham, Manchester, Carlisle, Edinburgh, Dundee, Aberdeen, Inverness, and Wick. Here and there a *plexus* is formed, carrying more wires to Bristol, Liverpool, Newcastle, &c. From these, again, further wires radiate. Not only from London (the brain), but also from Birmingham (the thorax), from Manchester (the mesothorax), from Carlisle (the metathorax); from Edinburgh, Dundee, Aberdeen, and Inverness (the abdominal ganglia), and from Wick (the sting) a further set of wires (or nerves) stretch out in all directions. Such is the brain, with its ganglionic chain and set of ganglia, connected by a double set of nerve fibres, which radiate from one extreme to the other of the insect's body; for the bee has just such an arrangement of nerves, nervures, and nerve fibres and fibrils, starting from the brain and capable of transmitting instantaneous messages to the most remote parts of the bee's body. A pin pricks the point of *our* finger. One of these nerve fibres, which like a network cover every inch of our system, immediately telegraphs to the brain, and a message is flashed back to every nerve and muscle of the forearm, which thus brings them immediately into play, with the result that the finger is withdrawn from further danger or molestation. Attempt to trifle with a bee, and instantaneously a nerve sends the brain a notice of the fact, and promptly there comes back instructions to the part affected, or to the body as a whole, how to act. Concurrently it may be an independent centre (Wick) informs the muscles of the sting, with their full control of the poison sac, the sting lances and their powerful levers, to act not only on the defensive but the offensive. I have supposed that, radiating from the centres on the main trunk line I have named, there are innumerable branches stretching to every large town in the kingdom; these in their turn connect with every small town, village, and hamlet, and even in country districts wherever population is gathered together the system extends, so that our Editor, if necessity arose, could have a reply to any message in the shortest of time. At the same time another message could reach me, say, from Edinburgh without interfering with the first. So the bee can often act independently of any message from the brain. Let us picture her hovering over a flower. We perceive her keen sense of

smell *unconsciously* (shall I say?) discovers that it has a supply of nectar secreted in its corolla. Without troubling the main centre, the ganglia of the œsophagus informs the different members of the trophi how to act so as to secure the coveted sweet, which accordingly they suck up and deposit in the honey sac. Again, the bee wants to walk or fly. A message is at once forwarded by the thoracic ganglia, and all the nerves required to put the leg or wing muscles in action are informed they are required to do their duty. All this time the ganglia regulating digestion are acting quite independently of what is going on in other centres, and quite unconsciously perform the necessary duties required to keep the insect in the health and strength which fit it for its manifold duties. The *sympathetic* nerves seem to regulate—almost independently of the will—the organs of respiration, circulation, and digestion. The nature of the *reflex* nerves may be best seen in the action of the œsophagus in sucking up the honey from the tube in the tongue, and forcing it down to the honey sac, or in regurgitating it into the cells.—D. M. M., *Banff.*

A BEE-DRIVING INCIDENT.

[4718.] On September 10 last, I journeyed out about three miles from here on a bee-driving excursion, taking with me my son, a youth of fourteen, who it quite as fond of the pursuit as myself. Our first venture was perfectly successful; but the second skep was evidently queenless, and in consequence the bees would not "drive," and so we very reluctantly had to leave them. About a mile further on, however, we met with some more stocks for driving, and this forms the substance of my story.

There happened to be staying in the house a bright American girl, and a very inquisitive, excitable and stout old lady (English) both of them very desirous of seeing "the fun"! As it was getting late in the day, and the bees were not in the best of tempers, I advised the ladies to don their veils (which the younger did), and then placed them in an advantageous position to view the whole proceedings.

Hardly had I commenced operations, however, when I heard a shout, and the exclamation, "Oh, I shall be stung, I know I shall!" from the dame, who at once commenced to throw her arms about in the usual style. Her hostess endeavoured to calm her fears, telling her that beating off the bees in that fashion was the very way to get them to sting her; the next instant there was a perfect yell! A bee had pinned her on the face. Without waiting further risk of damage she whipped her skirts up over her head and ran screaming into the house. I would have given almost anything at that moment for a "Kodak" snapshot, the back view being exceedingly fine.

The American girl stood it out without any sign of retreating, indeed, seeming both interested and highly amused.

The two lots of bees I united and fed liberally. They started breeding at once, and when packed down for the winter had every appearance of making a good stock for the forthcoming season of 1902.—C. H. Tomlinson, *Solihul Lodge, King's Heath, Feb.* 20.

CAN BEES DISTINGUISH COLOUR?

[4719.] As the varied colour of flowers is attractive to bees, and as the scent arising from them must be also of great use to the bee, saving its time in food-gathering, is it not reasonable to suppose that the hives or the entrance to them for some distance round should be painted some bright distinctive colour that would guide the bee to its own hive? Even men who live in streets where houses are much alike sometimes get to the wrong house unless they are careful in looking for the number. I have no personal evidence on this subject. I should like to know if any of your readers have.—A Reader, *Doncaster, February* 17.

DAMAGE THROUGH BEES.

COURT OF APPEAL (DUBLIN).

(Before Lord Justice FitzGibbon, Lord Justice Walker, and Lord Justice Holmes.)

This was an appeal from an order of the King's Bench Division changing the venue from Dublin to county Clare. The action was brought by Patrick Gorman, a farmer's son, residing at Gortoralougha, county Clare, who complains of defendants, Peter O'Gorman and Michael O'Gorman, farmers, both of the same place, for wrongfully, negligently, and injuriously keeping on the lands and premises of the defendant, Peter O'Gorman, a certain swarm of bees, well knowing that the said bees were of a dangerous and mischievous nature and accustomed to sting mankind and domestic animals, which said bees, whilst the defendants kept the same as aforesaid, attacked and swarmed on a horse of plaintiff's and whilst the plaintiff's father and plaintiff were in charge of said horse, and while endeavouring to protect the horse and to save and extricate him from the said swarm of bees the plaintiff was severely stung and injured by the said bees and knocked down and dragged along the ground by the said horse, and sustained grievous personal injuries to his spine and otherwise, and was thereby and is still prevented from carrying on his business, and has sustained and incurred great expense for surgical and medical attendance. The defendants pleaded specially contributory negligence, and that the plaintiff had brought the horse too near the bees and thus provoked them. The plaintiff now appeals against the order of the King's Bench Division, and asks that the venue be at least altered to Limerick.

Mr. Bushe, K.C., and Mr. P. Lynch appeared for the plaintiff.

Mr. Brereton Barry, K.C., and Mr. Phelps appeared for the defendants.

Mr. Bushe opened the appeal and said that the influence of the defendants was such in the county Clare that no fair trial could be had there, and that one of them was a member of the United Irish League and was appointed recently a delegate to attend a meeting of that body in Dublin. It was true the witnesses resided in county Clare, but he suggested that Limerick would be convenient as a medium venue, and he proposed it instead.

Mr. Brereton Barry, K.C., said that so far as the remarks about the United Irish League being an obstacle to a fair trial in Clare, the same remark applied to both parties, as they were all members of the United Irish League in Corofin, in their district.

Mr. Phelps, who followed, observed that the defendants would have a special jury for this action and there could be a fair trial had in Clare, where all the witnesses, seven in number, resided.

In giving judgment, Lord Justice Fitz-Gibbon said: It is a common case here that the United Irish League has large influence in co. Clare. It is sworn to that there cannot be a fair trial in Clare. I think the city of Limerick would be a fair place to have the venue laid. It has been stated that old Mr. O'Gorman, father of the defendant, cannot attend at Clare, but that he could attend at Limerick. A lucid picture, his Lordship continued, had been drawn by Mr. Barry of the inconvenience of people travelling to and remaining in Limerick in lodgings overnight. Jurors are on the spot in Limerick and have nothing to do but come from their shops. The town of Ennis was not a place where such accommodation could be got. From my experience going on circuit, I know this. A special jury of the co. Clare would be probably very different and not so intelligent as a jury in the city of Limerick, to which place we will change the venue. Costs to be costs in the cause.—*Freeman's Journal, February* 15.

Queries and Replies.

[2801.] *Bees Dying in Winter.*—I enclose four bits of comb from a stock just found dead. There are plenty of stores, including one frame half full of sealed syrup. There were about 500 dead, so I conclude the cause of death to be want of bees to maintain warmth, but would like to be sure. The frame of syrup will come in handy for one of my other stocks, if you can assure me that there is no foul brood about the comb. I will, therefore, be glad to know if it will be safe to use it as bee-food. My other two hives are very strong in bees. In the middle of December the stock now dead seemed healthy, as did the others.—R. Wey Crosland, *Cleckheaton, March* 1.

Reply.—1. We find no trace of disease in combs—the few sealed larvæ in cells being chilled to death apparently through lack of warmth. 2. Such of the combs as contain mouldy pollen—as in one sample—are not suitable for giving to your other stocks, and will be best destroyed, but the others may be given as food.

[2802.] *Number of Frames in Surplus Chamber.*—In reply to H. W. Ford (2799, page 89) regarding the number of shallow-frames in the surplus-chamber in a "W.B.C." hive containing ten frames in brood nest, you say you prefer the same number of shallow-frames in the surplus-chamber. I presume you mean by this to use ordinary "W.B.C." ends. My experience, however, is that eight frames with wide ends give better results, because of yielding a greater weight of honey. They are also less trouble in several ways. If your advice is right, I ask, What are the 1⅜-in. ends to be used for?—Ishmael Girling, *Suffolk.*

Reply.—The main object we had in view when replying (on page 89) was to point out that the surplus-chamber must be as large (outside measure) as the brood-chamber on top of which it is placed, so that then the outer edges of both would be "flush" on all sides. The question of using the ordinary (or 1⅜ in.) ends in surplus-chambers is a moot point with experienced men (including ourselves). Personally, we prefer to use only the ordinary "end" for both brood and surplus chambers, except specially heavy combs are needed for "show" purposes. And there are good grounds for this preference. It ensures uniformity in the stock store-combs; less chance of "breakage" when extracting; and a greater certainty that the combs will "uncap" easier from being built beyond the wood of the frame.

Echoes from the Hives.

Clevedon, Shrewsbury, March 3.—I am very pleased to say the weather has changed for the better in Mid-Shropshire and, since the 23rd ult., we have been enjoying a sight of the sun. On going down the garden to where my hives stand the air was filled with a happy throng of flying bees. I thought at first it might be a "hunger-swarm" coming down, but no, it was only the bees from my own hives out for a cleansing flight. I have had an opportunity of going through my forty colonies and, excepting one (a driven lot), they are all breeding and strong, and I saw hand-size patches of eggs and brood, so the queens are already making up for the loss of the worn-out workers of the colony.

Of course this is largely due to keeping only young fertile queens. I am looking forward to the work of raising early queens next month in carrying Doolittle's method of queen-rearing in some of my strongest stocks, and so I hope later on to give results. There has been a good sale here for honey this winter. Just a word to my Shropshire brother bee-keepers. Do not forget to turn up on Saturday and help our hard-working Association here. We are going to try and make a record honey show in 1902 and make it the largest honey show in the Kingdom.—W. H. BROWN.

Pilsby, Chesterfield, March 3.—After about nine weeks indoors, the bees had a regular turn-out on February 28, but as the sunshine only lasted a short time and a cold "sou'-wester" was blowing, many bees got down on the ground only to perish. I gathered a lot up, and after warming them before the fire they flew back home. I had been anxious about a small lot of driven bees, but they turned out well, though on examining I could only see a small patch of honey in one frame of the six; so I gave them a 1-lb. section over feed-hole to help them along a bit. The crocuses will be in bloom in a day or two. I shall try putting pea-meal in the blooms. I tried giving pea-flour among some shavings last year, but the bees never touched it. Mr. John Walton, in his "Echo" on page 90 last week, says they have had little snow at Leamington. In this locality we have had a long winter and a lot of snow; in fact, it has been a "collier winter," for they have worked full time all through it here.—TOM SLEIGHT.

Yorktown, Surrey, February 24.—I am but a beginner in bee-keeping; I only started last August, after the visit of the Surrey B.K.A. expert to a local flower show. I purchased Cowan's "Guide Book" and got the BEE JOURNAL, and I am looking forward to a good time with the bees this summer. I usually have a look at my hives every day to clear away any dead bees from entrances, and on doing so to-day I noticed at one hive, among a lot of dead bees, the part of insect enclosed. At first glance I was a bit alarmed, thinking it might be the remains of a dead queen. If it is, what shall I do? I may say it came from my strongest colony.—J. T. HURDWELL.

[The small part of dead insect sent affords almost no clue to enable us to recognise it by, but it is not a bee at all.—EDS.]

PRESS CUTTINGS.

HONEY IN HOUSE ROOF.

For sixteen years past two swarms of bees made their home in the roof of Strawberry Hall, the residence of Alderman T. W. Banks, at Tydd St. Mary, Lincs. That gentleman offered the honey to any one who would remove the bees and make good the roof. Mr. Carbutt, a builder, did so, and obtained twenty stones of honey.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

UNDER date February 28, Mr. D. Mappin writes as follows:—"Allow me, through the medium of your journal, to thank your correspondent, Mr. Marlow, for his information respecting lantern slides. I have, however, heard from another gentleman—who saw my query—and have got the slides I require."

M. A. K. F. (Guildford).—*Syrup-Feeding in February.*—Liquid food is unsuitable for bees at this early season, and will cause the trouble you complain of, viz., "Bees coming out to die on the ground in the cold." Soft-candy is the proper thing to give at this time, and for some weeks to come.

A. MCDONALD (Glenurquhart, N.B.).—*Soft-Candy.*—Sample sent would be excellent but for a little roughness in the grain. It only needs more stirring while cooling off in order to make it smooth and "buttery," similar to the fondant sugars used in chocolate creams.

T. MARSHALL (Nottingham).—*Honey Sample.*—Your sample is clover honey; and is good in colour and flavour, but shows slight indications of incipient fermentation. We fear it will be "out of condition" for the show-bench this season, as the earliest show is some months off. Remainder of your queries will be answered next week.

(MISS) D. B. (Torquay).—*Joining Bee-Keepers' Association.*—By writing the Hon. Sec. of the Devon B.K.A., Mr. J. Scholefield, Bickington, Devon, you will get full particulars of membership, and we have no doubt the Hon. Sec. will assist you in obtaining expert help with regard to starting bee-keeping.

C. R. (Glos.).—*Suspected Combs.*—Comb is badly affected with foul brood. On no account should the honey be used as bee-food. It is, however, quite fit for table use.

P. L. ALDRIDGE (Oxford).—*Insect Nomenclature.*—The insect sent is a queen wasp, not a hornet, as supposed.

*** *We are again compelled to defer Replies to a few Queries (not urgent) till next week, when we shall hope to have more space for full replies. We have also deferred our intended notice of Trade Catalogues till next issue.*

Editorial, Notices, &c.

LEICESTERSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of this association was held at the Victoria Coffee House, Leicester, on March 6. There was a good gathering. In the absence of Sir John Rolleston, M.P., Mr. W. P. Meadows was voted to the chair, and amongst those present were Messrs. Riley, Wright, Palmer, Roper, Bedingfield, Levers, Thompson, Fewkes, and J. Waterfield (secretary).

The twentieth annual report of the committee congratulated the members upon the fact that the affairs of the association continued to progress satisfactorily. The number of subscribers on the books was 199, as against 185. The expert visiting was carried out chiefly by the District Secretaries, who were qualified experts, and Mr. G. Munday. The number of members visited was 187, the number of frame-hives examined was 610, and the number of skeps seventy-seven, making a total of 687 stocks of bees examined and advised upon. The receipts for the year totalled £57 1s. 8½d., and after payments the Society at the end of the year had a balance in hand of £11 14s. 5d. The adoption of the report and balance-sheet was carried nem. con., as were votes of thanks to the retiring officers. The president—the Duke of Rutland—and the vice-presidents, including the Marquis of Granby, Lord E Manners, Sir John Rolleston, M.P., Colonel Curzon, and Mr. Maurice Levy, M.P., were re-elected, and the committee was also reappointed. The treasurer and auditor respectively were re-elected, as was also the hon. Sec, Mr. J. Waterfield. After tea, Mr. Peter Scattergood, of Stapleford, Notts., gave a couple of short lectures on "A Year's Work in the Apiary" and "Notes by the Way," illustrating his remarks by a series of lantern slides.—(*Communicated.*)

HUNTS BEE-KEEPERS' ASSOCIATION.

A meeting of this Association was held at the Fountain Hotel, Huntingdon, on Saturday, March 1, the Earl of Sandwich, President, in the chair. There were also present Sir Arthur Marshall, Mr. J. Linton, Mrs. Allpress, and Messrs. E. Allen, R. Brown, J. Howland, H. J. King, A. Sharp, S. Watts, and C. N. White, hon. secretary.

The minutes of the last meeting having been approved and signed, the prizes awarded at the Annual Show were distributed by the President.

The hon. secretary then suggested that, with a view to increasing the interest being taken in the work of the Association, four meetings should be held during the year, in January, April, July, and October respectively, April and October meetings being held at members' apiaries.

After discussion the suggestion was adopted unanimously. In order to lessen expense the President kindly offered to arrange for the Huntingdon meetings to be held at the Montague Institute. Invitations from Messrs. Sharp and Howland for the April meeting to be held at Mr. Sharp's apiary, Brampton, and from Mr. R. Brown that the October meeting should be held at Somersham were accepted.

The President inquired respecting the condition of bee-keeping in the county. Mr. R. Brown said that it was never more satisfactory. He had sold from his own and other apiaries over three tons of honey during the past season. Mr. Sharp also stated that he found no difficulty in disposing of the produce of his own apiary, in fact it was practically sold before it was produced.

The Hon. Secretary remarked that in honey-production, in honey exhibiting, in the bee-tent or lecture-hall, and in the manufacture of bee-keeping appliances, as the result of the work of their little Association, the county of Hunts equalled any in the kingdom.

In order that the meetings might be of more value educationally, it was decided that Mr. Sharp should be requested to read his paper on "Out-apiaries" at the Brampton meeting.

The scheme of insurance for bee-keepers, now being formulated by the council of the B.B.K.A., was then discussed, and it was resolved to recommend bee-keepers generally to take advantage of it: and on the motion of the President, the hon. sec. was instructed to send out copies of the scheme as soon as the rules and regulations were definitely settled.

The meeting closed with the usual vote of thanks.—(*Communicated.*)

NORTH NORFOLK B.K.A.

ANNUAL MEETING.

The annual meeting of the North Norfolk Bee-Keepers' Association was held on March 3, in the Reading Room, Briston, the Rev. W. H. Marcon, Edgefield, in the chair. The Hon. Secretary, Mr. C. J. Cooke, presented his eighth annual report, according to which we learn that the membership of the Association is gradually on the increase. Twelve new members have been enrolled, the total membership being now seventy-nine.

Mr. Cooke also presented his report as expert to the Society, which stated that the season has been a record one, both in the abundance and the quality of the honey gathered—quite a pleasant contrast to the grumbling and disappointment which were so frequent during the bad seasons of the last few years. In all apiaries I visited I found most colonies in excellent condition, and doing credit to their owners. There are a few cases of foul brood, and unless the bee-keeper is more careful in thorough cleanliness of the hive and appliances it is liable to increase.

Lord Hastings was re-elected President, and R. E. Horsfall, Esq., added to the list of Vice-Presidents. The Rev. C. Q. Knowles was reappointed Treasurer, and the Rev. — Plattin, Hindringham, was elected to the Committee in lieu of Mr. J. Frost, who has left the neighbourhood.

The meeting closed with the usual votes of thanks.—(*Communicated.*)

THIRSK AND DISTRICT B.K.A.

ANNUAL MEETING.

The first annual meeting was held in the Assembly Rooms, Thirsk, on March 5, and was well attended. The chair was taken by Mr. A. Meynell, Otterington, who, after a brief introduction, called upon the Hon. Sec., Mr. Tennant, for the report and balance-sheet, both of which were considered satisfactory—the former showing a membership of twenty-seven.

During the year two demonstrations in bee-keeping were given in connection with the Horticultural Show at Thirsk and Topcliffe, which seemed to be much appreciated.

The officers for the year were elected as follows:—President, Mr. J. Grant Lawson, M.P.; Vice-Presidents, Colonel I'Anson, J.P., Major Bell, J.P., Mr. E. R. Turton, J.P., Mr. A. J. Walker, J.P., and Mr. G. S. Thompson; Secretary and Treasurer, Mr. R. T. Tennant; Committee, Messrs. J. W. Hall, C. Moore, C. Trueman, H. F. Garnett, A. Meynell, and H. A. Shaw.

A profitable discussion followed on "Spring Management," which was opened by Mr. J. Lawn, and continued by several of those present.—(*Communicated.*)

ROYAL SHOW AT CARDIFF, 1901.

We have received a communication from Mr. R. H. Coltman, enclosing a copy of the following apology:—

"COLTMAN *v.* MEADOWS.

"Syston,

"December 2, 1901.

"DEAR SIR,—I desire to express to you my regret at having, in June last, published in the BRITISH BEE JOURNAL a letter reflecting upon the means of your obtaining the first prize for your bee-keeping exhibits at the Royal Agricultural Show at Cardiff.

"I withdraw such reflections, and undertake not to repeat them.—Yours truly,

(Signed) "W. P. MEADOWS.

"Mr. R. H. Coltman, Burton-on-Trent."

[In view of the above letter being dated December 2, 1901, it is due to ourselves as Editors to say that the delay in publication is not ours, seeing that Mr. Coltman's communication only reached us on the last day of February, 1902.—EDS.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

BRITISH *V.* AMERICAN HIVES.

[4720.] Having seen various letters discussing the question of size of frames in the BEE JOURNAL, I should like to get a little information on one or two points. I have myself kept bees for a number of years in British Columbia, and hope to start bee-keeping in England shortly. I should like to know from some of your readers who have had practical experience what are the supposed advantages of the British Bee-keepers' Association standard frame (size not taken into account) over the close-ended "Hoffman" frame now used in the States and Canada to a great extent. Also, what are the advantages of the long end for deep rabbet in the "standard" frame? Also, what is the idea of having so complicated a hive as is generally used in England? Would not the ordinary American single-walled hive, $\frac{7}{8}$ in. thick, all parts interchangeable, be a great deal better and cheaper? It stands out and winters well in lots of places in the States, with just a packing in the section-crate over the brood-chamber, and it is a great deal colder there than in England.—H. LYSONS, *Wellington, Salop, March* 3.

[We shall be very pleased to publish anything in the shape of practical information our readers may be good enough to supply Mr. Lysons with prior to his making a start in bee-keeping in the United Kingdom. But we venture to offer a word of advice before he invests either in American hives or adopts American methods in this country, viz., to procure a Guide Book on British Bee-keeping, and study it well. As Mrs. Gamp says, "Comparisons is ojus," and, as a rule, we studiously refrain from comparing our methods with those of our bee-keeping brethren across the Atlantic. At the same time, we are ready to affirm—without any offence—that our methods and our hives are more suitable to British bee-keeping and British bee-keepers than those practised and used in America. Moreover, the Senior Editor of this journal is perhaps as well acquainted with Trans-

atlantic bee-keeping—in all its varied styles and forms—as any bee-keeper in America. Moreover, his knowledge has been acquired on the spot, being the outcome of many visits to bee-men in the States—visits covering thousands of miles of travel in various States and long sojourns with American bee-keepers at their own homes.

The "Hoffman Frame" is no stranger to this country—indeed, one leading manufacturer here has included it in his catalogue for years past; yet it makes no headway with our bee-keepers. Cheap single-walled hives are also well known and used here. While, as regards "wintering" bees safely, we venture to say the percentage of loss is—in the hands of what we may call our bee-men who make a business of bee-keeping—very much below that of our American friends.—EDS.]

FOUL BROOD.

[4721.] In reading the article (4703, p. 84) by Mr. O. Browning about the appearing and disappearing of this disease, I am reminded of an experience which happened to me four years ago. I attended the "Royal" Show at Birmingham, and while waiting in the train on the return from Four Oaks to Aston station the conversation was turned on bees, in which, of course, I joined. After some talk on foul brood an elderly gentlemen, who had not spoken to us before, asked me if I would send to him a piece of comb affected with the disease if he paid postage. This I readily promised to do. He gave me his card and 1s., and next day I duly despatched a piece of comb to the address given. In due time he sent me his report on the same, after he had had the comb under careful examination a fortnight. A copy of this report I sent to you at the time, and it was duly published in the B.B.J., but the editorial footnote did not quite agree with it. However, I did, and what I may now be allowed to explain will show my reasons for so doing. In the first place foul brood was unknown in this district till all at once, on May 2 of that year, I found several of my stocks affected, and within a month so firm a hold had it got that I had burned twenty-two stocks of bees. Having done this I thought that the hives ought to be spared, so whenever the disease appeared in any other hive the bees, quilts, frames, and dummy were burnt! The hives I took about half a mile way to my home, where I scorched them well out with a "painter's blow-lamp." The hives were then well scraped, and given two good coats of thick paint, and are now in use again. I always keep a piece of naphthaline in each hive, and all food is medicated.

The question, therefore, is where did the disease start from? I will give you my opinion, and you and your readers will then be able to form their own. The gentleman I met in the train, to whom I have referred above (whose name I withhold), proved to be a specialist, who, I believe, is well known by his works on the subject. And his view is that the microbe of the disease came from foul decaying animal matter near my apiary, or, perhaps, from old thatched roofs near. Now it happened that both of these sources of disease did actually exist, and that within a few yards of my nearest hives, for the yards joining the orchard in which my hives were standing had that spring been taken by a firm of butchers, who kept a lot of pigs in them, and these animals were fed almost entirely on animal offal from the slaughter-houses occupied by the same firm up in the village. This offal was brought down two or three times a week, and left about in the most careless manner on the ground anywhere. The sheds to these yards were also thatched, and so old and decayed that they were falling in.

The gentleman closed his report by saying, "Find this out, and remove it, and the disease will disappear." But I could not remove the yards, so I removed the bees, and, as he said, the disease entirely vanished the year following, and I have not seen it since.

I now repeat what I have already said, let all enjoy their own opinion; I give this for what it is worth, but it is based upon absolute facts.

I am looking forward now to a good early spring and a plentiful yield to all. I am anxious to get to my apiaries, the nearest is a mile away and the other four miles, and as I am only just able to get out of doors again after a month of the flue, I am afraid my bees will miss their candy cakes.—A. COLLETT.

[That our correspondent's communication is interesting, readers along with ourselves, will no doubt admit, but unfortunately for bee-keepers, and for the theory advanced, there is a hard fact in front of us which we cannot get away from, viz., that *Bacillus alvei*, or foul brood, cannot be generated in the way suggested by the "specialist" observer whose report forms the subject of our correspondent's argument. If we had the name of the gentleman met in the train it might in some measure assist us in gauging the value of his views, but in the meantime we see no reason for changing our own.—EDS.]

A BEGINNER'S TROUBLES.

[4722.] I have for the last four years been struggling hard trying to keep bees. I succeeded well so far as bees were concerned, but that was all; I seldom got any surplus honey at all. Last year I had six strong hives, and goodness only knows how many swarms came off them, so numerous were they. I always put the swarms in makeshift hives. At the end of the season it was all bees and no honey. If you or any of your numerous readers would kindly inform me how to keep my bees from

swarming I would be thankful and would then, no doubt, get on better.

My bees came out few days ago very strong in the sun. The whole of them more or less soiled their hives by "specking." Some of the bees alighted on the ground, never to rise again. Is this a sign of disease? To-day (March 7) they were out again, very strong, but I failed to see any sign of the specking, as previously. —ARCHIBALD MACISAAC, *Dalmally, March* 8.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Leipziger Bienen Zeitung (Germany), gives an interesting paper on the reason why bees visit pools of liquid manure during the brood time, as they are often seen to do. An analysis of 6 lb. of this against 2 lb. of freshly killed bees shows as follows:—

	Liquid Manure.		Bees.
Hydrogen	31·50 gr.	...	30·10
Potash	5·70 ,,	...	5·00
Soda	13·80 ,,	...	·80
Lime	·60 ,,	...	·40
Magnesia	·60 ,,	...	1·10
Phosphoric acid.....	5·40 ,,	...	5·60
Sulphuric acid	1·20 ,,	...	Hardly a trace.
Hydrochloric acid...	15·00 ,,	...	Hardly a trace.

We may therefore conclude that the bees take the liquid as help in nourishing the young brood, and probably also the queen-bee. Honey is sufficient nourishment for the full-grown bee; it is only at brood time they are seen to visit these haunts. The question arises whether by providing them with a suitable mixture they might be prevented from taking to themselves this unpleasant form of nourishment.

The following is offered as a suggestion:—

Chlorate of soda	4	gramms.
,, lime	1	,,
,, ammonia	3	,,
Sulphate of soda	1	,,
,, lime	1	,,
Phosphate of soda.....	2	,,
,, chalk.....	1	,,
,, lime	1	,,
,, magnesia ...	1	,,
Water.....	1	quart.

The queen is said to require hydrogen and mineral salts to enable her to produce healthy brood.

From the same.—The question is raised whether bees can see, the writer maintaining that they cannot, but that they do everything by the other senses of feeling and smell. Another correspondent, however, has a very different view of the case; he says that if a bee is brought outside the hive at night (even by moonlight) it will flutter around and cannot find the entrance. Why this, if not from want of light. A bee taken into a room will at once fly to the window, but if its eyes be painted over and darkened it will remain quite still, or if forced to move flies anyhow upwards and hangs to anything in its way, or falls helplessly to the ground. One sees that it is blind.

It is also evident that the senses of touch and smell do not help the bee outside the hive. The conduct of a drone deprived of his feelers will prove this, and also that within the hive these senses are quite indispensable.

A bee deprived of its feelers is not capable of continuing its existence, as it can no longer even find its own nourishment.

Revue d'Avignon.—A society has been formed in France, we are told, to resist the adulteration of bee-products by every means in their power. Especially that of comb foundation is strongly denounced, and it is said that if the unprincipled conduct of manufacturers continues it might lead to the abandonment of the movable-hive system altogether. Those who prepare their own wax and make their own foundation are in the best position; they have then no complaints to make.

Revue Internationale d'Apiculture (Switzerland).—The difficulties for bee-keepers in some of the higher districts are very great, as in the valley of Laas in the "Haut Valois" in Switzerland. Last winter being long and more than usually rigorous, with heavy snowfalls, many of the hives in this valley were entirely destroyed. The bees were shut in so long that they never recovered from their winter sleep; others died of dysentery, which raged in the district. Some, deceived by the glare of the snow, perished in numbers on its cold bosom. The curates of Zermatt and other places have lost nearly or quite all their hives. Of a large apiary at Fée there was only one hive left. A supply of 26 lb. of honey per hive was allowed, but when—as has happened three times in the last thirteen years—the winter lasts from the end of August to the next June 50 lb. of honey per hive would not be too much. In these bad years the honey harvest is absolutely nil, lasting only two or three weeks. The larch, which is a great resource when flowers do not bloom, gave its honey liberally, but the bees could not gather it on account of the heavy rains. Larch honey is slightly brown in colour, has a rather curious taste, and is of medium quality. Rhododendron honey, on the contrary, is very fine and much sought after.

Bulletin de la Société d'Apiculture de la Somme.—A simple way of destroying wasps' nests consists in steeping a rag in turpentine, and to stuff it into the nest or into the hole that leads to it. The next day the whole colony of wasps will be found suffocated.

Bulletin de la Société d'Apiculture de la Tunisie.—On March 18, 1901, several hives

belonging to a bee-keeper in Tunis showed a disposition to send off secondary and tertiary swarms, the young queens making themselves heard in an unusual way. A thunderstorm hindered them for several hours, but at last a spell of sunshine brought out a strong swarm, and at the same instant a clap of thunder and a sudden shower caused them to settle in little clusters on the apiary wall. As, when the rain ceased, the bees did not move, I fetched a ladder and examined the first group of bees, and found three beautiful queens; so on with all the clusters. Having been asked for queens, I wished to capture some; so taking a bottle, I put eighteen together into it. In a few minutes, however, I perceived that a fight *à l'outrance* was proceeding, and all these queens perished. Then, having learnt by experience, I placed each queen separately in a small screw of paper. The clusters of bees then united. I found thus forty-five magnificent queens, and the next day twelve more outside the hive, where the swarm had been placed.

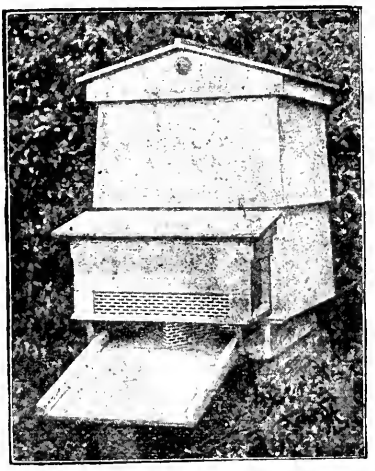
NOVELTIES FOR 1902.

EDWARDS'S SWARM-CATCHER.

(Design Registered.)

The "Novelty for 1902" shown below has a special interest for readers just now, and we are glad to give it a word of approval from a thorough personal inspection. It seems to us a distinct advance on anything yet introduced. For the rest, we, in accordance with the usual custom, leave the inventor to describe the appliance in his own words. He says:—

"A thoroughly reliable swarm-catcher has been a long-felt want; and although much time and thought have been bestowed upon



attempted fulfilment of this want, nothing sufficiently satisfactory to secure a permanent abiding place among bee-keepers has so far been placed on the market. 'Catchers' have come; catchers have gone—more nuisance than use has been the general verdict. But the latest bid for favour promises to succeed where others have failed; and in the swarm-catcher and self-hives here illustrated the inventor has provided an appliance in which the bees have a free and unimpeded entrance to the hive, there being no obstruction of any sort to negotiate. At the hive entrance a sharp angular projection, seen at the centre, divides up the stream of home-coming bees, and deflects them into side tunnels, which, open at both ends, extends about half way into the hive; and whilst it is possible for bees and queen to find an exit through these tunnels, Mr. Edwards is emphatic in his assurance that they do not do so, their natural instinct leading them towards the stronger light at the front of the hive. Unladen workers pass readily through the excluder zinc guarding the front—though they make no attempt to find an entrance there—but queen and drones are guided towards the apex of the triangle, immediately over which is a cone leading to the 'hives' chamber above; and as the queen is trapped so close to the entrances, it is almost impossible for the bees of a returning swarm to fail to find her. The appliances had trial at Mr. Edwards's hands last season, and he claims that it answered his every expectation, working without the slightest hitch, and capturing swarm after swarm in every instance. Whilst not complicated in construction—there being nothing to get out of order—the 'catcher' is ingeniously contrived to take advantage of the bees' natural instincts, and as it eliminates faults inherent to those 'catchers' gone before, we are inclined to think—so far as can be gathered without a personal trial—that the appliance bids fair to fulfil expectations. We welcome it as a carefully thought-out attempt to settle a thorny question—how to prevent the loss of swarms during the absence of the owner. A circular giving further particulars can be had in return for a stamp, addressed H. Edwards, Shrubs Hill, Sunningdale."

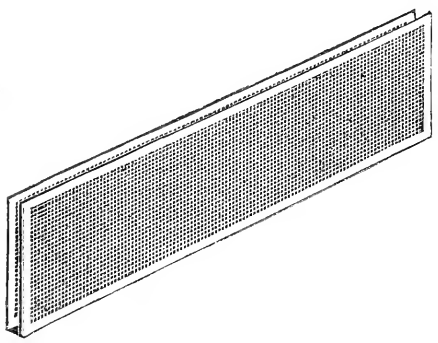
THE "SHEPPARD-HOWARD" BEE-SPACED WOVEN-WIRE DIVIDER.

(Patent Applied for.)

The new device for ensuring perfectly filled and sealed sections seen in the "cut" on p. 106 is the joint production of Mr. W. J. Sheppard, Hon. Secretary of the Essex B.K.A., and Mr. John H. Howard, Holme, Peterboro'. It may not be quite easy to fully realise the advantages which are secured by the use of the device from a glance at the "cut;" we, therefore insert the following details written by the inventors themselves:—

"The principles of the device will commend

themselves to all bee-keepers. It has long been evident that the present style of dividers has been mainly responsible for much of the trouble at present existing through the excessive swarming of stocks supered with sections, and the comparatively small percentage of perfect sections obtainable from each hive. By the use of the Woven Wire Bee-spaced Dividers the bees will have a clear, uninterrupted passage-way direct from the brood-nest between each row of sections, and the heat therefrom will be more evenly distributed through the bees having more room to form larger clusters, they will be able to secrete wax quicker and better, resulting in more honey being stored and more perfect



The "Sheppard-Howard" Divider.

sealing and finish. Unfortunately, these dividers are at present rather expensive, but as a set-off to this they will with care last a lifetime, and if by their use more comb-honey and more perfect sections can be produced, the extra cost will be a secondary consideration. The dimensions of the divider are 12¾ in. long by 4¼ in. deep, five doubles and two singles for either end being required for an ordinary section-rack. Eighteen sections, however, can only be accommodated instead of twenty-one as formerly. As they are 4¼ in. wide, it will be seen that they cannot be used with ⊥-shaped girders. Four-way sections are recommended to be used as being most suitable."

All particulars can be obtained from J. H. Howard, the Model Apiary, Holme, Peterboro'.

STARTING AN APIARY.

The novice in making a start should not plunge too suddenly or too heavily into what are to him unknown waters, as he may get beyond his depth, and into difficulties beyond his powers, which at the very beginning may cause a feeling of dislike to the pursuit. It is far better to begin with one or two stocks of bees, and, after acquiring a knowledge and liking for apiculture, to add gradually to outfit, appliances, and number of hives. It is only as a pastime, or at most as a slight adjunct to one's income, that nineteen out of every twenty bee-men start an apiary. Yet it is one of our minor industries which deserves every encouragement, as, rightly managed, it is the best paying of them all. As a hobby pure and simple, no other that pays so well can be named, and as a healthy outdoor pursuit none more invigorating to mind and body can be placed on an equality. In making a start it is best to begin with a swarm ; and, in regard to appliances—hives, frames, foundation, quilts, smoker, veil, crates, sections, dividers—should all come direct from an appliance dealer. The latter days of May or the first week of June is the best time to order the swarm, just at the opening of the white clover bloom. If got from a distance they travel in a swarm-box. On receiving them, remove the top and shake out the bees on the flight-board, which should be temporarily enlarged with a large box-lid, covered with a newspaper or a sheet of brown paper. It may be well to have the smoker alight as a reserve force if required, and the veil should be in position or handy when the bees are shaken out of the box, though they rarely volunteer a sting. Pay particular attention as to the queen, for if she is seen to run in the bees will speedily follow her. Indeed, their one aim, as soon as they perceive the entrance, is to make for it, and a loud and pleasant hum of satisfaction is set up while they scamper in a solid body for their new home. It it is decided to start with an established stock in either a bar-frame hive or a skep, early April is generally the best time to do it. The shifting at this time rouses up the bees, and gives them new energy, which makes the most of the strange fields and pastures new where their lot is cast. If the purchase is a skep, and bought from a neighbour, some care and discretion is necessary, or the bargain may turn out a "pig in a poke." Turn up the skep on a mild day, giving it a puff or two of smoke. Note the number of seams of bees ; if the stores are ample ; if the combs are well or ill built ; if they are fresh, or too black and old ; if they look pollen-clogged, mildewed, or showing any old sealed cells lying here and there, spread indiscriminately over the face of the comb, with flabby, depressed, and occasionally punctured sealing. Beware of purchasing then, as it is a hotbed of disease. If, however, the hive is clean, not too old, the bees fairly numerous, and the works fresh, it may be safe to invest at a fair price. In taking it home carry it mouth up, first covering it with a piece of cheese cloth. Keep the skep only as a medium for filling up your bar-frame hives. This is the only use of a skep in modern bee-keeping. If the purchase is to be a bar-frame hive, examine the interior minutely, and see that it has plenty bees, ample stores, fresh combs, and bars of the true standard size. Where it is necessary to purchase anything second-hand, a novice should secure the aid of a practical and experienced bee-keeper to make a

thorough examination before investing. If, however, the seller is a man of probity, a guarantee from him that the bees are sound, healthy, and free from disease may be sufficient. Experienced apiarists will understand why all this caution is advised.

A proper start in any line of life helps largely to attain success. In bee-keeping it means winning half the battle. If a beginner buys a diseased stock of bees, invests in a badly-constructed, ill-fitting hive, purchases a poor half-starved lot of bees, failure follows at the very start. His enthusiasm gets spent, his fancy for the hobby evaporates, and he gives up in despair before he has well begun. If hives of all kinds, shapes, and sizes are bought, just because they are got a so-called bargain, he lays up for himself at the outset a load of care. If the hives are provided with different sized frames he supplies himself with an endless amount of worry. Hundreds do all this, get into a quagmire, and end in throwing up bee-keeping as a failure. Therefore, in making a start, several things are of first importance if success is to be assured.

First.—Get a good text-book. The writer knows no better than Mr. Cowan's "Bee-keepers' Guide Book." It is sound, practical, concise, methodical, and thoroughly trustworthy. Every subject included in bee-keeping is handled briefly, but to the point. The sound common-sense of experience illumines every page, and the reader feels that he can depend on every statement as coming from a master in the art.

Second.—A good bee paper is indispensable. Every bee-keeper who desires to keep abreast of the times must subscribe to one or other of the *Bee-keepers' Monthly Record* or the weekly BEE JOURNAL. They supply articles in each issue on every conceivable subject connected with bee-craft. All the latest in bee news, and facts connected with the pursuit, are recorded in their pages; and the editor, with a qualified staff, answers all questions pertinent to the industry.

Third.—Try, if possible, to get the services of a friendly practical bee-man in making your start. Rely on him for initial guidance. You have no idea what an amount of needless blundering you may thus save yourself. As a class they are very clannish, and always glad to give the benefits of their knowledge to novices. Learn what you can from these, but do not draw too much on their good nature, or you may become a keeper of bees but never a bee-keeper.

Fourth.—Endeavour to see most of the principal manipulations performed by an expert—never mind though he has no certificate. You will learn more in a single lesson than you yourself might discover in a haphazard way in years. Note the quiet and confident air with which he goes about the work of opening and examining a hive, and contrast it with your own fussy and excitable mood. Note the half-puff of smoke thrown across the hive rather than at the bees, and contrast it with the clouds a novice aims at them, half suffocating both operator and the insects operated on. Note the quiet, gentle, gliding motion—cool, deliberate and precise—and contrast it with your own rapid, jerky, banging commotion. Note, too, the temper of the bees. You will see them going on with their work, marching in and out of cells, depositing honey and pollen, tending the young larvæ, while the queen goes about her maternal duties quietly and deliberately. Contrast this with your own frequent experiences when you find a seething mass of infuriated insects, each armed with a poisonous weapon, rushing madly at you as soon as you lift the quilts or coverings from the frames.

Fifth.—Never, if possible, buy anything cheap or second-hand. Good articles are best and cheapest in the end. Second-hand hives and appliances are generally the worse of the wear, and may be the depositories of disease. —D. M. M., in *Banff Journal.*

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of February, 1902, was £247.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

WEATHER REPORT.

WESTBOURNE, SUSSEX.

February, 1902.

Rainfall, 2·06 in.	Sunless Days, 12.
Heaviest fall, ·43 in., on 24th.	Below average, 17·6 hours.
Rain or snow fell on 15 days.	Mean Maximum, 39·9°.
Above average, ·13 in.	Mean Minimum, 31·1°.
Maximum Temperature, 50°, on 28th.	Mean Temperature, 35·5°.
Minimum Temperature, 19°, on 16th.	Below average, 1·5°.
Minimum on Grass, 7°, on 16th.	Maximum Barometer, 30·62°, on 1st.
Frosty Nights, 16.	Minimum Barometer' 29·27°, on 27th.
Sunshine, 74·7 hours.	
Brightest Day, 16th, 8·5 hours.	

L. B. BIRKETT.

Echoes from the Hives.

Hatfield Heath, Harlow, Essex, March 10. —So mild was the weather in the middle of January that bees were breeding well then. And on January 21, when Lord Rookwood was buried here, I saw bees working upon the violets and hyacinths in the wreaths and crosses of flowers placed upon the

grave. But there is evidence in most hives at the present time that this early breeding was nipped in the bud, for there is here and there a cell with chilled brood in them. I saw hazel catkins in bloom, too, in the third week of January, and these also were nipped and withered by frost and wind; but like the bees, the catkins have been in preparation for the coming season since last August, and like the bees have mostly stood the test of severe frost very well.—Wm. Loveday.

Salford Priors, near Evesham, Worcester, March 10.—I am quite a beginner in bee-keeping, having only one stock, which consists of two lots of driven bees from skeps, and united in a bar-frame hive last autumn. This stock, I am happy to say, is a very strong one. Reading in the "Guide Book" of giving pea-meal as artificial pollen I tried it last week, but the bees would not take it. Yesterday, however—it was a glorious day—I placed some pea-meal in the cups of some single daffodils in close proximity to the hive, and in a few minutes the bees had discovered it and took it greedily. I had to fill up the flowers several times during the day. I thought this might interest your readers, more especially when I say that the flowers were plucked and tied on sharpened sticks, which I stuck into the ground.—J. R. O.

Brent Eleigh, Lavenham, Suffolk, March 1.—After severe frost and snow for a few days, the weather has once more allowed the bees to get a cleansing flight, and I took advantage of the opportunity to take a peep under the quilts. I find my seventeen stocks have so far come through safely. The tits have been very busy around my hives all the winter, and have made sad havoc amongst my currant bushes. There are scores of them around here, so a bone or two would not be much amongst them. I am looking forward to a busy season, and hope it will be a good one for all bee-keepers. If it would be of interest to any one, I would send comparisons between eleven hives of bees and thirty-two hens during 1901, both of which received the best attention of my wife and myself during the year.—Walter Turner.

[We will be glad to have particulars mentioned for publication.—Eds]

Queries and Replies.

[2803.] *Bees Dying on the Ground in Spring.*—Will you please tell me in next week's issue what is the best plan to prevent the bees from venturing out at this time of year the moment they get a bit of warm sunshine, and perishing in numbers on the ground in front of the hive by finding the weather too cold for them? Having only commenced bee-keeping last spring, I was naturally anxious about my bees' first wintering, and great was my joy yesterday to see both my hives surrounded with a cloud of happy humming bees enjoying the south wind and gleams of sun. They evidently thought, as I did, that spring was near at last—the thermometer registered 50 deg. at 10 a.m.! It made me, however, a little anxious to see that a number were crawling on the ground; so I put boards for them to climb up to the entrance. But, alas! in the evening the ground was strewn with corpses, and I have lost even more to-day from the same cause. So this is evidently not the "cleansing flight" of the guide books that should rejoice the bee-keeper's heart, and I cannot afford any more "Spion Kop's" among my bees! Now, which would be the wisest course, to keep the perforated zinc slides of the entrance closed, as I have now done? or (1) to place an upright board in front of the hive door to shade it from the sun, and leave the entrance open for ventilation? 2. In one hive the bees have finished their candy-cake. Should I now give them candy or syrup? Here in the Peak of Derbyshire we are always late and cold. Is it risky to give syrup so early in the year? An answer to these queries will greatly oblige.—A Beginner, *Ashbourne.*

Reply.—1. It will not do to keep the bees confined to their hive on such days as the warmth and sunshine tempt them forth for a needed cleansing flight. A shade-board placed some little distance away, while keeping off the bright sunshine, is almost the only remedy. 2. On no account give syrup-food at this season; only good soft candy is suitable, and even this should be dispensed with wherever stores are plentiful, as all artificial feeding from the outside tends to bring the bees out more than when only natural stores are relied on for food.

[2804.] *Driven Bees Dying during Winter.*—As a reader of the Bee Journal I should esteem it a favour if you will answer the following in your next issue:—About a fortnight ago, being suspicious that one of my stocks (a stock made up from driven bees last autumn) was short of stores, I examined and found this so. I then placed a box of soft candy on top of the frames. Upon examining them again to-day (27th), to my surprise I found the whole of the bees dead. At first I thought it a case of starvation, but upon examining the combs I found all the bees clustered on several frames at the front of hive close to entrance, which frames contained no food. The two back frames, however, were well filled with food, but the box of candy was only partly consumed. I therefore would ask whether it is usual for bees, rather than leave the cluster, to obtain food at the back of the brood next on the last frames to starve? They were a fairly strong stock. A great number of the bees I found head first in the cells. Can you suggest a reason for them dying in

this manner? — NASANOFF, *Stafford, February* 28, 1902.

REPLY.— One of the disadvantages attached to hives with the frames hanging parallel to entrances is the risk of bees starving to death near the entrance after consuming all the food in the first two or three frames. The cluster naturally moves towards the entrance; why, we cannot say, but our experience is that they do; and as they do this the stored combs are in the rear of the hive, necessitating a long journey to reach the sealed food. Thus, if the temperature is too low for free travel the bees perish of hunger. The fact of the dead bees being "found head foremost in the cells" is a sure sign of death from famine.

[2805.] *Damp in Hives.*—This last week of almost summer weather which we have experienced up north has made the bees quite lively. Accordingly I have profited by it, and, following instructions from the "Guide Book," I on Saturday cleaned the floorboard of my hive. It is a "W.B.C.," new last summer, wherein I placed a swarm in July. 1. Is it usual to find the floorboard in a very damp condition? The wood was so wet as to be spongy when I scraped it. The enamel quilt had beads of water on the under surface in places, all of which, I suppose, are due to condensation. 2. Can this be as healthy for the bees as if some porous material was placed immediately above the frames for the winter months? Dampness, I read, is fatal for them, but my stock seem to be numerous and healthy, from the short look I had of them. I shall be much obliged if you will kindly give me your opinion of the above.—ROBERT H. CHADWICK, *High Park, Southport, March* 3.

REPLY.—1. No, and if there are plenty of bees in the hive, damp in spring does no damage. 2. We have known bees winter with an enamel quilt overhead and not a sign of dampness seen. It is as the late Mr. Raitt used to say, "the best winter packing for bees is *bees!*"

[2806.] *Preventing Drone-Rearing.*—I shall esteem it a favour if you could enlighten me on a few points on which I am not quite clear. 1. Would it be desirable, seeing that I only possess one hive at present, to prevent drone-rearing? I ask because of being given to understand that drones are useless, except for fertilising purposes; and as I already possess a fertile queen, would it become detrimental if the bees are not allowed to raise drone brood at all? 2. Would it tend to stop swarming if, at the same time, I cut away all queen-cells as constructed? 3. Does fertilisation take place before or after the swarm has been hived? 4. Kindly give me your opinion of the enclosed sample of syrup. Please also say if this will be suitable for spring feeding if I add some more water. Am I to add boiling water or cold? 5. How can I preserve drawn-out combs? 6. On p. 19 you say: "The issue of all swarms beyond the first may, if desired, be prevented by destroying all queen-cells, and introducing another queen." If the young queen is already hatched out, would she not do if you destroyed the remaining cells? Of course, I understand it would be some time before she commenced laying.—H. E. WILKES, *Birmingham.*

REPLY.—1. It is inadvisable to prevent drone-rearing entirely. Restrict it by all means, but allow a few inches of drone comb on a couple of frames, and you will find the stock all the better for it. 2. "Cutting out all queen-cells as constructed" is a nuisance, and often fails in the object aimed at. 3. The queen of a second swarm is mated after being hived. 4. Syrup is not very good; you should mix that now on hand when boiling up more sugar for food, and let the syrup be fairly thick when given to the bees. Watery food in early spring is not good for bees. 6. Yes, certainly.

[2807.] *Transferring Bees to Frame Hives.*—Last August I started bee-keeping. I bought a swarm advertised in the *Exchange and Mart*, which, when swarmed, had been put into a box 13 in. by 13 in., and allowed to work in same. The weather was very hot when it was sent to me, with the result that combs were broken down and smothered fully two-thirds of bees. A friend, who is a bee-keeper, put what was left (and, fortunately, the queen was among them) into one of his empty hives. I had to start at once to feed them. Now, my friend's hives are not fitted with "Standard" frames. As the hive was only lent me, I sent away for a modern one, and when it arrived I put the old frames with bees into it. Now, I am desirous to put bees on to "Standard" frames with clean foundation, and would be pleased to have your advice, or any readers' of the B.B.J., as to the best method to adopt.—ONE ANXIOUS TO LEARN, *Darlington.*

REPLY.—Under the circumstances—and if the frames on which the bees now are fit into your new hive—we advise you on no account to attempt transferring the combs to "Standard" frames. Leave the bees on their present combs, but remove all frames not covered by bees, and as the bees increase and need room give a frame fitted with full sheet of comb-foundation. A week or ten days later give another frame, and so on till the full number is made up. The other odd-sized frames may be gradually replaced by "Standards" as a chance occurs of removing one or more when empty.

[2808.] *Giving Pollen in Early Spring.*—The last few days having been fine and sunny, with crocuses and gorse in full bloom. I put some pea-flour in the crocus-blooms, and also in an open place, on Friday. This seems to have over-stimulated the bees, for to-day I see dozens of dying bees on the ground around the hive. I have now stopped giving the pollen. 1. Taking into consideration the fact

that Jersey is about a fortnight ahead of England generally, what ought I to do to prevent or reduce this alarming mortality? The hive is well supplied with honey, and seems strong in bees. 2. Did I do wrong in giving pollen so soon?—OLIVER MOURANT, *St. Aubins, Jersey, March* 2.

REPLY.—1. We have always stated that the best time to give artificial pollen is when bees are seen to be gathering natural pollen. If this is attended to, the evil you complain of is minimised as much as possible. 2. You only did wrong so far as stimulating the bees to work more actively than if they were not tempted outside in cold weather by the artificial pollen given.

TRADE CATALOGUES RECEIVED.

John H. Howard, Holme, near Peterboro'.—Mr. Howard in his latest list for 1902 sends out a very full and complete catalogue of everything in "up-to-date" bee-keeping. While making, as usual, a speciality of foundation-making (and, by the way, including samples of "British Weed" foundation which do infinite credit to him), nothing of real service to bee-keepers is omitted. He also supplies very concise and useful directions to customers so that no mistake can arise in his methods of trading. His catalogue also contains a full illustrated description of the "Reitsche" hand-press for those who desire to make their own comb-foundation.

E. H. Taylor (successor to T. B. Blow), Welwyn, Herts.—Mr. Taylor seems to have "caught on" to the American fashion of manufacturing on a large scale, and establishing agencies or depots in different parts of the United Kingdom. He also supplies goods wholesale for sending abroad as a "manufacturer and shipper." It was a special feature of Mr. Blow's bee-trade to exhibit at important Continental exhibitions, where he gained the highest awards. Mr. Taylor can also claim the credit of being the first British bee-appliance manufacturer to make hives on the dovetail principle, as is now the fashion in America. We hope to see this principle generally adopted in this country. The list before us is very full and complete; it is well illustrated and contains "Hints on Successful Bee-management."

R. Steele, Wormit, Dundee.—Another well-got-up list, nicely printed and illustrated. It is essentially a "Scottish" catalogue, as shown by the names by which many of the hives are designated. No less than eleven hives are described and illustrated by admirable woodcuts, along with bee-goods of every kind and fashion. There are also engravings of poultry houses and appliances, such as incubators, &c., along with dog-kennels and various buildings for garden use. Mr. Steele also adds "Hints and Instructions to Beginners in Bee-culture" for those who desire to make a successful start in bee-keeping, which is well written and reliable.

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

G. W. J. (Cornwall).—*Transferring from Skeps to Frame Hives.*—If your proposed plan of transferring means allowing the bees to transfer themselves to the frame-hive, let us know, when we will give particulars, unless you possess a copy of the "Guide Book," which latter contains full particulars. There is ample time yet before thinking of any transferring operations.

J. HILL (Walton, Liverpool).—*Honey Comb Designs.*—The usual way is to have a "top-side" of wood to which the comb-foundation is fixed; but in some cases the foundation is affixed to glass, as in the capital design in honeycomb shown on p. 183 of B.B.J. for May 9 last year.

INQUIRER (Suffolk).—*Some Queries on General Bee-work.*—1. If a swarm comes off unseen from one of several hives, the fact that it has swarmed can only be ascertained, first, by the depletion of bees in the swarmed stock; and second, by listening for "piping" seven or eight days after the swarm issued. 2. When two queens fight for supremacy, the "fittest" usually survives, but it cannot be "safely concluded" that this will result. 3. Giving surplus-room alone will never "effectually prevent swarming;" it is only one means to that end. 4. There is no advantage whatever in providing water-troughs for bees if a running stream or a lake is close by.

F. J. (Mountmellick).—*Giving Soft Candy in Spring.*—1. If food is short you can continue giving candy with advantage until natural food is obtainable outside. 2. Syrup-food should not be given till natural pollen is being gathered by the bees.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F. B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor, Bee Journal," not "Manager."

T. W. (Colchester).—The sealed brood in comb sent is "chilled" only. There is no disease about it. The small sample, however, shows serious signs of dysentery.

R. LITTLE (Beattock, N.B.).—Comb sent contains only pollen (some of it mildewed) and food; no trace of brood or of disease.

Editorial, Notices, &c.

RURAL INDUSTRIES.

PROPOSED CONFERENCE AT WARWICK CASTLE.

We have much pleasure in acceding to the request of the Countess of Warwick—as conveyed in the following communication—by inviting the attention of our readers to the conference, on May 1, at Warwick Castle, especially as her ladyship takes great interest in bee-keeping as a branch of agriculture suitable for ladies, and has established an apiary at the "Lady Warwick Hostel," Reading, which is being successfully managed by the lady students.—[EDS.]

"May I ask for space in your valuable paper to lay the following suggestions before your readers:—

"The great growth of the past century indicates that co-operation and co-ordination is especially needed in things agricultural. Co-ordination is lacking, not because of the innate dislike of people to co-operate, not because of jealousy between societies and associations, but chiefly because of the lack of opportunities of learning what others are doing.

"Taking the subject of village industries, for instance, it is most difficult to get definite information either as to what is being done in certain localities, or where special industries flourish.

"Again, there are many possibilities for the promotion and establishment both of the lighter branches of agriculture and of many of the rural industries in villages and districts, but the individuals who have the will to start them either have not the power, the training, or the knowledge to see the possibilities within their reach. This lack of training and knowledge, of course, reacts upon the rural population, and contributes to the rural depopulation.

"Then, again, many local industries are cramped through not being more widely known, and many an individual started upon an independent career suffers through lack of a market; thus associations and individuals need the stimulus of friendly competition and mutual co-operation.

"It is proposed to hold a conference at Warwick Castle on May 1 next, to provide an opportunity:—

"(1) For those directly engaged in any other lighter branches of agriculture or rural industries to make known their work.

"(2) For those who are interested in the things pertaining to the welfare of our country districts to learn what is being done to stay the rural depopulation.

"(3) For an interchange of ideas and sympathetic suggestions between those engaged in allied industries.

"(4) For those who need teachers or trained workers to meet those who are fully trained and capable of teaching others.

"(5) For the binding of all these in one strong organisation for co-operation and co-ordination.

"It is, therefore, hoped any who are interested in the objects for which the conference is called, and who wish to learn fuller details of the programme of the discussion, as also of the hospitality to be offered for the occasion, will write for particulars to the Warden, Lady Warwick Hostel, Reading, or to myself. —Yours faithfully,

"FRANCES EVELYN WARWICK.

"*Warwick Castle, March* 14."

SHROPSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting was held in the Mayor's Court, Shrewsbury, on Saturday, March 8, Mr. Roff King, Chairman.

The Chairman mentioned that, as a gratifying result of his attendance along with Mr. W. H. Brown as delegates to the Shropshire Horticultural Society, on behalf of the S.B.K.A., it was decided to pay off their debit balance of £12, and, in addition, to present the association with a donation of £20 extra to commence the season of 1902 with.

The 1901 show was referred to as being one of the most successful which had been held, the entries being 122 in excess of 1900, while the whole display was regarded as one of the best in the kingdom for quality, size, and attractiveness.

The report and balance-sheet were agreed to.

In proposing the election of Lord Inchiquin as President for the current year, the Chairman stated that Lady Inchiquin was an enthusiastic bee-keeper. The motion was seconded and carried *nem. con.*, as was also the election of Miss Eyton as hon. treasurer, and that lady formally thanked for her generosity and valued services to the association for many years past. Mr. Cartwright (secretary) was likewise thanked for the way he had executed his duties, and reappointed to office.

The Chairman then called upon Mr. W. H. Brown, who, on behalf of the members, asked their Hon. Secretary, Mr. S. Cartwright, to accept an honorarium of £5 as a small acknowledgment of his unfailing courtesy and the painstaking way in which he had fulfilled his duties as Hon. Secretary of the Association in connection with the very successful show of 1901.

It was also agreed, on the motion of the Chairman, that Mr. Cartwright be presented with an illuminated address to commemorate the occasion.

The Executive Committee for 1902 was then elected, and comprised the following:—Chairman, Mr. Roff King; Messrs. Beale, Brown, Bradley, Clay, Carver, Croxton, Griffiths, Graham, Jones, Holland, Hammond,

Prein, and Scott; Hon. Secretaries, Miss E. M. Eyton and Miss A. Downward; Hon. Treasurer, Miss Eyton; Hon. Secretary, Mr. S. Cartwright.—(*Communicated.*)

ESSEX BEE-KEEPERS' ASSOCIATION.

A general meeting of members of the above association has been called for Friday, March 21, at 6 p.m., at the Devonshire Hotel, Bishopsgate-street Without, E.C., to decide the question of extending the work and benefits of the association so as to embrace the county of Suffolk, in addition to Essex.—W. J. SHEPPARD, *Hon. Sec. Essex B.K.A., King's Head Hill, Chingford, March* 13.

LANCASHIRE B.K.A.

We are requested to draw the attention of Lancashire bee-keepers—and all in the county who are interested in bee-keeping—to the fact that Mr. J. F. Williamson, Crystal-terrace, Byron-street, Fleetwood, has been appointed Secretary of the Lancashire Bee-keepers' Association, and that in future all communications should be addressed to him.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

HUBER ON THE HARMONY OF SWARMING.

[4723] "Can you detect any discords in this harmonious concert of numbers? The sweet humming is to my ears composed of true notes only. Aerial music that goes straight to my heart; and whether or not it be that what seems to me expressive, touching, and melancholy—I will even say solemn—comes from within myself or from my imagination, I have never listened to it coldly. . . . Whence comes this music and the impression it produces on me? I will try and tell you. Do not reject the idea too quickly; for a physical law comes to support the feeble perception, and seems to lend it authority."

(Huber here explains that although one note only may be sounded on a musical instrument, or may appear to be produced by a swarm, a series of harmonic tones in perfect accord is produced, all capable of being distinguished by a trained ear.)

"Who knows, and, above all, who can say what a swarm feels in the midst of such a harmonious atmosphere. Think you that I may believe, and say that this mass of sentient beings surely feels, if in a modified fashion, something of the effect that the sweet harmony produces on myself? When you, too, shall have breathed the balsamic and honey-laden air that is the atmosphere of swarms, the idea of the happiness of all these beings will surely take hold of you. You will be glad to think that it has been accorded to them. Penetrated, as you are, with gratitude for all the good things that have been lavishly bestowed upon you, you will thank the great dispenser (Nature) for not having forgotten what makes for the happiness of the least of her children."

"Bees, by nature very irritable, seem to be not in the least so when it comes to swarming; at that time they show no sign of frowardness, not the least wish to retaliate for the ill-treatment that is too often bestowed upon them. It is this gentleness that then enables us to take possession of them; and as the benefit to us is beyond doubt, let us try to be worthy of it—let us treat these good bees not as slaves, but as members of our family and good workmen, whose well-recognised services observe reward."

The above extracts are from "Lettres Inédités de François Huber," published in Switzerland by Ed. Bertrand in 1897. They have been slightly condensed in translation, but are as near the original as was possible. The letters were written by Huber in 1829, when in his eightieth year, to a young lady nearly related to him and learning under his directions to become a bee-keeper.—H. J. O. WALKER (Lieutenant-Colonel), *Lee Ford, Budleigh Salterton, S. Devon, March* 14.

SOME ESSEX NOTES.

[4724.] *About Foul Brood.*—I think the letter of Mr. Owen Browning (4903, page 84) in the B.B.J. of February 27 supports my views as expressed on page 55, *i.e.*, that a good honey season is of great assistance in ridding us of foul brood. At one time or another I have done a good deal of expert work, and my experience is as stated above, though I have not been able to decide why this should be so, or why in a poor season the disease increases and spreads so much more. Nevertheless, such is the case, without any doubt. Mr. Browning very wisely destroyed stocks in which the disease was in the advanced or spore stage, and because these stocks were probably in a condition quite beyond the bees in coping with it. But in the case of the slightly affected stocks the bees are apparently able to deal with it in a good season if assisted by the bee-keeper. So continually is foul brood proving its power as an enemy of bee-keepers in new districts, that the only way to derive pleasure or profit from the pursuit is to

keep only just so many colonies as can be thoroughly well managed. And those who value these points will use preventives regularly in their hives at all times.

Since writing my last "notes" two bee-keepers have already informed me of recent outbreaks in their apiaries. In one case the bees, located a few hundred yards from my informant's own hives, had foul brood last year. They are in the care of an old labourer on the place, and he (in ignorance, of course) threw the discarded combs out upon the garden ground when the bees died out. In the other case, the bees of a neighbour—whom it would be a misnomer to call a bee-keeper—have for some time, with good reason, been suspected of being in a bad way, but the owner is quite unapproachable on the question of bees. The owners of the recently-infected apiaries are both cottagers who devote their leisure hours to intelligent modern bee-keeping, and it may truly be said that they are suffering through the ignorance and indifference of others.

It has recently come to my knowledge that a bee-keeper who, a few years ago, owned a large apiary in the North of England, and lost the whole of his stock—involving a loss, I am told, of about £200 through foul brood—has packed up his hives and appliances and come south. I have no doubt that the bee-keepers of the district he has left (to whom I am told he was nothing short of a nuisance) were glad enough to be rid of him. But he clings to those hives and appliances still. It was sheer inability to see the necessity for destroying by fire the source of mischief that brought ruin to his bee-keeping. Another bee-keeper known to me, who never could treat his diseased stocks in a thorough way, has recently removed into a district where he is unknown, and it makes one feel truly sorry for those who are now his neighbours, for it will probably be a sore trial to their pleasure or profit in bee-keeping.

Out-Apiaries.—In thanking Messrs. R. Brown and Allen Sharp for their contributions on this interesting subject last month, I must say that the necessity not only for a *summer residence*, but also for the command of a horse and cart, in extensive bee-keeping operations is made more plain than ever. Friend Brown relates how himself and a friend sat up the greater part of two nights and extracted 12½ cwt. of honey. Well, I shall not be surprised if the next Somersham native that I meet says, "Richard Brown! Oh, 'e's as strong as a hoss!"—Wm. Loveday, *Hatfield Heath, Harlow, Essex.*

DOOLITTLE'S METHOD OF QUEEN-REARING.

[4725.] While thanking our Editors for inserting my "Echo" in B.B.J. of the 6th inst. (page 99)—and my mention of the fact that I purposed trying Doolittle's method of queen-rearing—it would almost appear as if your readers had never heard of Mr. Doolittle before, seeing that I have received no less than thirty-one letters from readers asking for an explanation of the "method." To reply to all these would be a task quite beyond me. I thought the best way out of the difficulty would be to ask you to insert the following details of the Doolittle method in the B.B.J. It would look better in print, and would be for the benefit of those thirty-one enquirers along with other readers.

Doolittle's system is artificial in a sense, yet he endeavours to make this method, or methods, conform to Nature's ways. The first prominent importance in the rearing of queens is to bring about the necessary conditions, that will present themselves during the swarming season, especially at a time when the bees supply the cell-cups lavishly with royal jelly; thus, the first requisites are strong, powerful colonies. Secondly, a light honey-flow, or a condition nearly analogous; very stimulative feeding if no honey is coming in (say, half a pint of syrup daily).

Mr. D. was, I believe, the first who conceived the idea of making artificial cell-cups in which to rear queens. He takes a piece of wood, and rounds it off to the size and shape of the bottom of the cells; two or more are likewise fashioned. Preparatory to forming the cells he has a little pan of bees-wax, kept liquid by a small lamp, also a cup of water. Seating himself down, he is ready for work. Taking one of his little sticks, he dips it into the water, after which he plunges it about $\frac{5}{16}$ in. into the melted wax. He then lifts it up, and twirls it at an angle (waxed end lowest) in his fingers. When cool he dips it again, but not quite so deep; thus on until the cup is dipped seven or eight times, but each time dipping it a less depth. The main thing is to secure a cup having a thick, heavy bottom, but which will have a thin, delicate, knife-like edge at the top. After the last dipping is quite cool, a slight pressure of the thumb loosens the cell-cup slightly. That brings me to the point that Mr. D. has his cell-cups fastened in rows on a stick, this stick being fastened in a brood-frame, and the cell-cups look, when completed, like a rake's head.

The next operation is to insert a small particle of Royal jelly in each cell, say, about the size of a "B" shot, but a lesser quantity will be found to answer. Out of a queen-cell we should get enough for twenty cups. This Royal jelly should be taken from a queen-cell ready to seal. The jelly should be well stirred to bring it all to the same consistency, after which dip it out of the cell by means of a stick the shape of an ear-spoon or a toothpick bent to that shape.

The next operation is to take a frame of young larvæ just hatched from the egg laid by our most prolific breeding queen (even if the larvæ be one to two days old it will do). Each

grub should be very carefully picked up and gently laid in one of the cell-cups, and when all are supplied they are to be put into a cell-building colony.

Then, after the insertion amongst the brood-combs of the tiers of cups, we are all ready for the bees to begin where man left off.

Having quilted up, &c., we begin giving it daily feeds at once, as this is the prime requisite for the best results in cell-building, either with a queen or without one. It will be best not to give this colony more than, say, eighteen cups at a time. Allow it to finish up one batch, and then, if necessary, give it another, and be sure and be careful to remove each lot before they hatch, for a virgin queen would very soon play havoc with the other cells unhatched, and besides would get the colony out of the notion of trying to supersede the old queen.

Just how far supersedure bees will continue to build out batches of cell cups one after another I am not able to say, but if fed with half a pint of syrup daily they appear to be willing to keep up the work indefinitely, in the hope that some day they will be able to rear a virgin that will supplant the old queen that appears to be failing. Hoping all bee friends will understand this epistle.—W. H. Brown, *Clevedon, Shrewsbury, March* 15.

BROOD-REARING BY BEES.

IS THE LARVA FED BY ABSORPTION?

[4726] I sent Lord Avebury the letter published in your monthly, the *Record*, for March, in which Mr. H. W. Brice (on page 39) gives the result of his experience of the wasps he has had under his observation. His lordship's letter in reply to mine is annexed, and as it raises an interesting question I send it in order that the point may be discussed and general profit result therefrom.—E. D. Till, *The Priory, Eynsford, Kent, March* 17.

6, St. James'-square, S.W.
March 16, 1902.

Dear Sir,—I have read Mr. Brice's letter with interest, but is it really clear that the larvæ of bees are fed by absorption? The question is one of much interest. I hope that Mr. Brice will continue his observations.—I am, yours truly, Avebury.

E. T. Till, Esq.

"ROYAL" SHOW AT CARDIFF.

[4727.] Referring to the editorial footnote to my communication on page 102 of B.B.J. for March 13, may I be allowed to say that when accepting the apology from Mr. P. Meadows, I stipulated that the same should be published at the beginning of March. Therefore the Editors are in no way to blame for the delay. —R. H. Coltman, *Burton-on-Trent, March* 14.

(*Correspondence continued on page* 116.)

HOMES OF THE HONEY BEE.

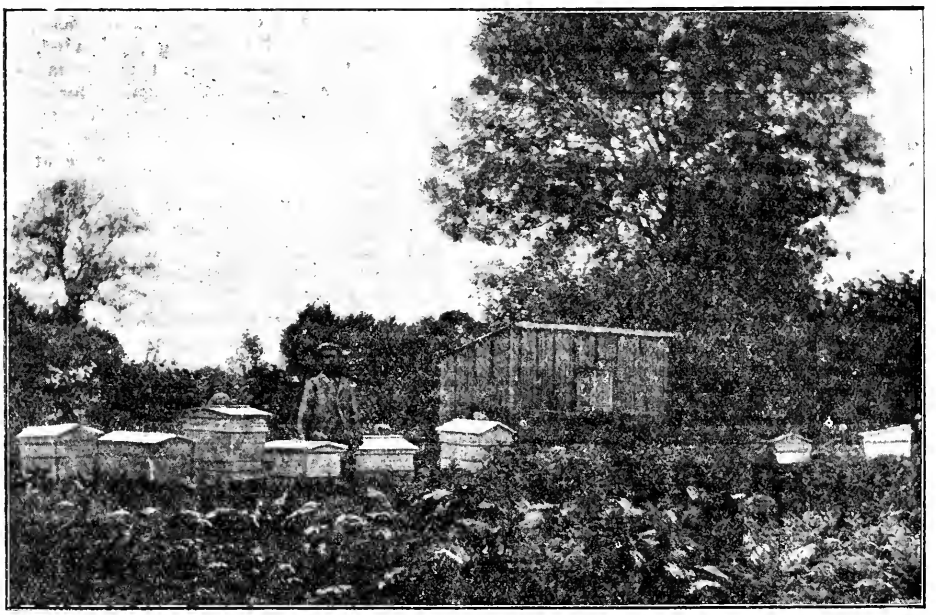
THE APIARIES OF OUR READERS.

We have peculiar pleasure in presenting to readers the "Home of the Honey Bee" seen on next page, and the owner thereof. Mr. W. Loveday is so well known by his useful and practical articles dealing with bee-craft in this journal that he needs no introduction from us. In every sense a "cottager bee-man"—as he insists on being designated—Mr. Loveday is typical of the best of his class, and our only regret is that—owing to the physical weakness resulting from the unfortunate breakdown in his health mentioned by himself—he has been prevented from doing so much for bee-keeping as he would have done under happier circumstances. Starting in life from the humblest beginning he has under great difficulties stuck to his bee-keeping, and his writing on the subject is backed up by practical results such as few can show. For the rest his "notes" speak for themselves. He writes:—

"I have been brought into contact with bees more or less from my earliest days, but it was not till well on in my teens that I had any desire to possess a hive of my own. My first active bee-experience was when I had nearly reached the mature age of four years. I was then staying with a relative, and noticing the busy insects issuing from the little hole at the bottom of the skep, it occurred to me that nothing else but a stick to stir up the bees would do for the occasion, and I stirred them up accordingly. As to what the bees thought of my idea, the wonder is that I am here to-day, so deeply did those bees force their impressions into my mind and body. This is the first thing that I can remember! and in my mind's eye I can see those bees leaving the skep, that little stick about a foot long, and the first two or three whirls round in the skep that I gave it just as clearly to-day as when it occurred. Born just before the close of the days when school-going was 'optional,' my father being an agricultural labourer, and I the eldest of the family (there have been fourteen of us), I began going to work regularly at nine years of age, sometimes threshing with a flail with my father all through the winter. Had my father's several attempts at bee-keeping been more successful, what a number of little faces around our family table would have smiled when the honey-pot was added to the fare! which at the best of times could never be over-liberal. But those were days when the belief in bad luck in connection with bees was more common than now, and it required quite an effort on the part of a cottager to buy sugar wherewith to feed a colony of bees that might be in need of food; the cheapest sugar in those days was 4d. a pound. When fourteen I was engaged at indoor work at a gentleman's school near London, and here had the good fortune to have employers of the kind who are so valuable to the young of both sexes—who realise that the moulding of the character

of the future man is in the hands of those under whom he is placed when he first goes out into the world. Indoor employment, however, was objectionable to me from the first, though I kept at it for a few years. I then gladly accepted an opportunity to leave the house for the garden. I thus first became actively interested in bees, but it was some time before I had a garden where I could keep a few hives of my own. Having studied the little handbook, 'Modern Bee-keeping,' I was able, with the help of many useful hints from the B.B.J., to assist several bee-keepers who I knew, with my own limited knowledge, were in need of assistance with their bees. Unfortunately, about this time I got very wet one day in early spring, took a chill, and was a thorough cripple all the following summer and autumn from rheumatism. A medical man has since given me his opinion that my bee-keeping—or rather the numerous and unavoidable stings I got now and again—have played an important part in preventing a return of the rheumatism. From these early days I became convinced that bee-keeping well carried out would yield both pleasure and profit, but while otherwise employed my bee-keeping was mostly of an experimental kind in order to ascertain the truth or otherwise of what I read. But even then it was profitable in the generally understood sense. But I can safely say I have never had the pleasure of keeping bees under good and comfortable conditions. At one time they had to be located in a narrow strip of town garden. Now, as seen in the photo, they are in the bottom corner of an open field, facing north-east and east. Here hundreds of chilled bees may be gathered up on a treacherous spring day. Eight years ago I had the misfortune to injure my spine, and through the years of weakness and anxiety which followed I have derived the greatest possible comfort from tending the bees. And truly the 'little labourers' teach us much in industry, cleanliness, and in making the most of things as they find them.

"In 1891 I was able by the kindness of my employer, who afforded me every reasonable opportunity to study apiculture, to pass the B.B.K.A. examination for third-class experts. I have also since passed a special examination on foul brood. I find that it is generally supposed that I have quite a large apiary, but I keep only so many stocks as I can thoroughly well manage, usually working about eight for honey, and the same number for queen-rearing and other purposes. I have never from my first year of bee-keeping had enough honey to fill orders, and though I sell very little honey at home, I usually help other bee-keepers to dispose of their produce. I may add that a customer for my honey in my first year is still one of my best patrons. I am expert to the Bishop's Stortford and District B.K.A., and have been for some years an hon. district secretary of the Essex B.K.A. Realising my indebtedness to those who have gone before, I am glad to be able to assist the inexperienced bee-keepers of to-day by contributing to the pages of what by the courtesy of the Editors we call 'our journal.'"



MR. W. LOVEDAY'S APIARY, HATFIELD HEATH, HARLOW, ESSEX.

CORRESPONDENCE.

(*Continued from page* 114.)

NOTES FROM WEST ESSEX.

[4728.] The past winter has been a very good one for bees in this locality, considering the satisfactory condition of most hives I have seen during the past few weeks. Where the stocks were strong and containing a vigorous young queen, breeding commenced early. Without disturbing the combs it was easily observed that brood was plentiful, and sufficient stores still in reserve for the spring. One case of death to a stock had occurred where the number of bees was small, apparently having frozen to the combs during the severe frost (20 deg.) due to starvation, although quite 12 lb. of honey was obtainable, some being uncapped, and bees buried head downwards in the cells when they were overcome by the intense cold.

It has given one a great amount of pleasure to be with the bees on mild, sunny days, when they were merrily humming tunes during musical drill and enjoying the vernal warmth flitting to and fro to the crocuses, snowdrops, monkshood, and hazel catkins, where they vigorously worked for pollen. It will be noticed that I have mentioned bees collecting pollen from hazel catkins, which was a subject for a good deal of discussion last year. This week I was in an apiary where the hazel was plentifully grown, and there I saw, while talking to the bee-keeper, bees gathering pollen from the catkins, which were large and plentiful. I was very pleased to see in the *Journal of the Pharmaceutical Society of Great Britain* a paper which was read before a meeting of pharmacists on bee-keeping, recommending them to become practical bee-keepers wherever opportunity afforded for so pleasurable and profitable a study, which is to be obtained by having a hive or two of bees.

One has recently met people who said their bees do not produce much honey and never swarm. On inquiring when the stocks were requeened it was found to be not for years, which undoubtedly was the cause of the trouble of which complaint had been made. It would seem that this is often the cause of bee-keepers saying that the modern frame-hive does not seem to have a great advantage over the old fashioned skep. Then again the bees are very often neglected at the essential time for feeding, supering, and taking of honey. One case I have in my mind at the present moment occurring last year where sections and foundation were needed for refilling the supers which was delayed long enough to find the season for honey-gathering in the past. If only proper attention were given to these important matters there would be a greater yield of honey and a much more satisfactory balance-sheet at the end of the bees' financial year.

My own average per hive last year was 50 lb., the largest quantity from one hive 80 lb., which I thought a very good one considering the chief source to be clover.—A. W. SALMON, *Cashfield, Sewardstone, Chingford.*

LABOURERS' FREEHOLD DWELLINGS.

[4729.] My friend Mr. Brice told me that my contribution some time since on the subject of cheap bungalows ought to have been published in the *Builder* instead of the B.B.J. (*vide* page 8 of last year's vol.), and that another letter I sent you should have gone to the *Matrimonial Gazette*. I like criticism, especially from "H. W. B.," and therefore I am about to give him a further opportunity. The Local Government Board granted my petition in 1899, and conceded the right to build wooden bungalows where building by-laws exist in rural districts; but the Dartford R.D.C., being pig-headed, did not adopt the concessions. I, in ignorance of this, built a six-roomed bungalow for £100. The Dartford Councillors contend it is against the law, and have ordered me to demolish or remove it (see copy of correspondence at foot hereof). This is a most important question for bee-keeping, because an urban style of housing is becoming the fashion, without any gardens, is eating the heart out of country life. Cottage industries cannot exist without cottage gardens. With bungalows costing £100 on cheap half-acre plots, our rural parishes would "blossom as the rose." Rural Councillors oppose the scheme (see enclosed letters). Nevertheless I believe it will prosper.

The Local Government Board's new "Rural (Advisory) Code of Building By-laws" is a model of perfection (6d. Eyre & Spottiswoode). All who are interested in rural housing should get it.—E. D. TILL, *The Priory, Eynsford, Kent, March* 17.

The correspondence referred to is as follows:—

Dartford, Kent, February 27, 1902.

DEAR SIR,—Will you be kind enough to inform me whether you require the District Council to serve you with a formal notice to pull down the house you have built, in accordance with their resolution of Tuesday last? This will not be necessary if you will undertake to remove it.—Yours faithfully,

J. C. HAYWARD,
Clerk to the Council.

E. D. Till, Esq., Eynsford, Dartford.

The Priory, Eynsford, Kent, March 1, 1902.

J. C. Hayward, Esq.,
Rural District Council, Dartford.

SIR,—In reply to your last letter I have this week appealed to the Local Government Board, who have not only conceded the original permission in response to my petition in 1899, but they have quite recently issued a new model set of by-laws for rural districts, in

which the *whole* of the urban clauses your Council retain in their building regulations (and on which you base your objections) are entirely swept away. You cannot, therefore, be surprised if I refuse to destroy a structure that meets with the approval of the Local Government Board, and at the same time the dire need of our district.—Yours truly,

E. D. Till.

NOVELTIES FOR 1902.

THE DAWSON COMBINED FEEDING-STAGE AND WINTER-PASSAGE.

I herein forward an illustration of a little bee-appliance, devised by myself to form a combined winter-passage and feeding-stage over the frames. Fig. 1 shows the contrivance

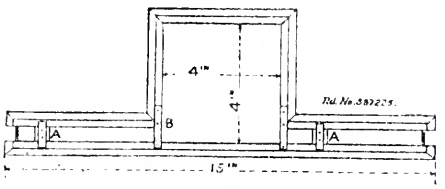


Fig. 1.

by itself, and in fig. 2 it is seen in position above the top-bars of a ten-frame hive.

It is made from strips of wood $\frac{5}{8}$ in. wide by $\frac{1}{2}$ in. thick, properly joined at the corners and braced together by thin pieces of metal, as shown at B fig. 1, and by screws at the extreme ends. The small slides at A A in

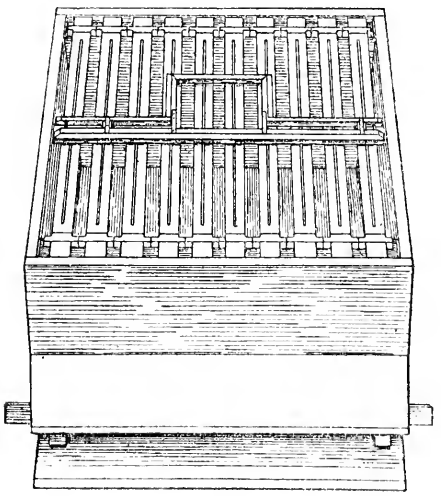


Fig. 2

the same figure are movable, and serve to restrict the passage-way to just so many seams of bees as it may be deemed necessary to give access to the food.

When using, the appliance is placed directly on the top-bars of the frames, the latter being covered by a quilt, with the feed-hole immediately over the square portion marked 4 in. by 4 in. This square part is the feeding-stage, and is so made that an ordinary section filled with candy will just rest on the top of it. It also serves to support an ordinary stimulating feeder. The space between A and A, fig. 1, when covered by the quilt forms the winter passage.

I have tried this appliance in my own apiary since last autumn, and found it very convenient; it enables me to give either syrup or candy with great ease and the least possible disturbance to the bees, while affording not only a good winter passage to their own stores, but also to any food given them from time to time. The glass-cover to candy allows free inspection of food.

Having found the contrivance useful to myself, I think it may possibly be so to others. —W. Alfred Dawson, *Loversall, Cobham, Surrey March* 11.

Echoes from the Hives.

Aultmore, Keith, Banffshire, March 7.—Bees flew freely here on January 20 for the first time since November. Then again on February 23 and on most days in current week. On the 5th inst. our first spring local flower, Tisilargo (specimen enclosed) bloomed. I take this to be Coltsfoot. It was the first flower in 1901 that my bees "worked" for pollen. Snowdrops just in bloom. Crocuses about 1 in. out of ground. Odd blooms of primroses and polyanthuses in "cosy" corners only—a bleak, cold, windy, exposed situation this! A marvel how bees can live here.—A. Brayshaw.

Yeovil, Somerset, March 3.—I have two hives which did very well last year. They are headed with queens two and three years old respectively. To-day has been a lovely day, and with the two hives in question I have six stocks in all. I saw a number of drones. The bees were carrying in plenty of pollen, so hives are not queenless. Drones were killed off last year. Other hives not so busy, but pollen was being carried in all of them. I have not examined interior of hives yet. Is not this exceptionably early for drones?—G. W. Perry. [Yes, if the stock is in normal condition.—Eds.]

Gadderden Row, Hemel Hempstead, March 14.—I am very pleased with the ten days' spell of beautiful weather we have just passed through. It has been a glorious time for the bees; they have been flying freely during the whole time, gathering pollen from the hazel and willow, and visiting the early flowers of the nettle, chickweed, and wall-flower. While walking in the fields to-day I

saw the first wild violets and primroses; in sheltered woods and dells I also noticed daffodils ready to open in full bloom; so that even now should the cold weather set in the bees will be all the better for this flight and the nitrogenous food they have been able to gather. During one bright sunny afternoon last week I examined my hives, and was very pleased to find them in strong and healthy condition with the exception of one hive, in which there was plenty of bees and food, but no brood as yet. The other stocks had patches of brood on from three to five frames. My hives each take ten frames, but the bees were wintered on eight only. The supers were all removed early in September, thus allowing the bees time to fill up the brood-chambers, as there was a lot of seed sainfoin standing in the fields adjoining. It has been a mild winter in this district, though we have had several sharp snaps of frost, though not of long duration. I may say there has been an exceptional demand for honey this season. In fact, I have had to refuse many orders both for sections and extracted honey, as was the case last year. It seems a great shame that there are not more bees kept in this part of the country, seeing how good the forage is. Within two miles of my apiary there are over 100 acres of sainfoin, besides fields of beans, cherry orchards, both lime and chestnut trees, and white clover. Again, almost every field is yellow with the blossoms of "charlock" whenever we have a "turnip year." But unfortunately there is no association for Herts, which is a great help to bee-keepers generally. Some of my best hives gave me 120 sections, besides extracted honey, notwithstanding the fact that I am unable to give my bees such proper attention as I should like, or I might have more.—ARTHUR E. FORD.

Lower Broughton, Manchester, March 17.—I venture to send an "Echo" from Derbyshire, where my hives are located at Cressbrook, near Buxton. I started with one stock in 1895, and have increased it to ten. I make my hives myself, they are all of the "W.B.C." pattern. Two years ago my work took me away from home, so that my apiary is now an "out-apiary." I pay a visit to the bees once a week during the honey-season. Last season was my best, the average yield being a half cwt. per hive. The honey was of good quality, being a blend of clover and heather, although the latter forage is two miles away. The bees have required no feeding-up for the last three winters, having plenty of natural stores. The winter of 1901-2 has been notable for three heavy falls of snow, after each of which my hives were completely buried, but—save an occasional peep under the quilts—they have not been disturbed since October until March 2, when I overhauled them, cleaning all floorboards and reducing the number of frames to as many as the bees could just cover. All queens were laying, and several stocks had sealed brood on four frames. In one hive I noticed an egg in a cell that was nearly full of pollen. In another, although there was plenty of cell-room, the queen had laid six or seven eggs in each cell for a space of about 5 in. square. I think bee-keeping a pleasant and paying hobby. I am looking forward to a good season, and wish all brother bee-keepers the same.—W. H. BENNETT.

Queries and Replies.

[2809.] *Dealing with Early Swarms.*—I would like your advice on the following:—There are a good number of fruit trees, &c., in this neighbourhood, so I will probably begin supering early. In case of a swarm issuing when supers are on the hive, I intend to hive swarm on four to six frames, and give them super from parent hive to finish. 1. After super is finished, can I keep bees to same number of frames and continue supering until end of honey season? 2. If so, what about winter stores? Would the frames they are on hold sufficient for the winter, or should I add frames of foundation until body-box is full? And when should the frames be added; immediately supering is over, or when I commence rapid feeding?—G. GELDARD, *Walton, Liverpool.*

REPLY.—1. You can, of course, do this, but it is not advisable. By all means get the brood-nest furnished with at least eight frames of comb while the comb-building impulse continues. This is the best course for many reasons. 2. "Winter stores" is one of the reasons we have in mind, but by no means the most important. Therefore give a frame of foundation in centre of brood-combs ten days after hiving, and a second after removing the full super. Then, if honey still comes in, add two more to make up ten for winter.

[2810.] *Loss of Queen During Winter.*—1. I enclose piece of comb, and would like your opinion about it. It was taken on Thursday, the 6th inst., from a hive that has all the appearance of being queenless, and the little brood there is (same as sample sent), has all the appearance of being the offspring of a fertile worker. 2. Is this so, or is there any foul-brood in comb sent? The hive is fairly strong in bees, and there are no signs of hatched-out drones, so the queen must have disappeared in late autumn or winter.—H. M., *Harrow, March* 8.

REPLY.—1. The drone-brood in worker-cells clearly indicates loss of queen and one or other of the results named—*i.e.*, either an unmated queen or a fertile worker. 2. There is foul-brood in comb sent.

[2811.] *Planting Shrub Fence for Bee-forage.*—I destroyed a stock of bees last year that

was affected with foul brood; my other six hives seem healthy, but as it is possible they may become diseased, I ask:—1. Can I do anything to stop infection, and when? 2. One side of my garden has a stone fence 3 ft. high, and I would like to plant a shrub fence to reach, say, 6 ft. high. Can I help the bees by planting shrubs that would yield honey or pollen in early spring? 3. Does what we call the red and white "flowering currant" yield honey or pollen, or do you know of a better? Does honeysuckle yield honey or pollen? The fence is about 50 yards long. 4. Will the insurance scheme be in working order before a lot of us are in for damages?—TARFF WATER, *Kirkcowan, Wigtownshire, March* 8.

REPLY.—1. Use naphthaline in each hive as a preventive and medicate all food given in autumn. 2. If space is no object, a fence of the willow commonly known as the palm willow (*Salix caprea*) will afford an abundant supply of pollen in early spring. 3. No. The flowering-currant is useless for bee-forage. 4. You will be duly informed in this journal when the insurance scheme is in working order.

[2812.] *Transferring Bees from Box to Frame Hive.*—I propose to begin bee-keeping, and a neighbour, who keeps them in a primitive fashion in boxes, has given me a box full of bees. What shall I do with it? Shall I transfer direct to a frame-hive, or put the box (14 in. square) on the top of a hive in the expectation that the bees will work down and store their honey in it? In this case, I suppose there would probably be no swarm? I suppose there is no B.K.A. branch in this remote county.—E. WITHINGTON, *Baldwin's Moor, Manorbier, Pembrokeshire.*

REPLY.—Put the box and bees on the top-bars of a frame-hive—properly prepared and fitted with full sheets of foundation—and allow the bees to transfer themselves to it. Cutting out old combs and tying them into new frames is a practice now nearly obsolete, and the sooner it is completely so the better. Full directions for transferring as recommended appear in the "Guide Book." We are not aware of any B.K.A. in Pembrokeshire.

TRADE CATALOGUES RECEIVED.

W. R. GARNER, *Dyke, Bourne.*—Mr. Garner's list for 1902, though not so voluminous as some, is concise and well arranged. He illustrates seven hives in all, at prices varying from 25s. to 10s. 6d. Among his *specialities* we notice the registered tin dividers for use with no-bee-way sections, and a new material for covering hive roofs, &c. It is called "Ruberoid" felting, of which—judging from sample sent—we think bee-keepers will do well to take note, so good does it seem to us.

R. H. COLTMAN, 49, *Station-street, Burton-on-Trent.*—The first thing that strikes us on opening Mr. Coltman's new catalogue is the entire revision it has undergone for 1902; size, illustrations, and general arrangement are entirely different from former lists. It is well printed and illustrated, and contains all needful requirements for the apiary, including "Hints" on bee-management, which, as the writer is a "certified expert of the B.B.K.A.," may be relied on.

WM. BOXWELL, *Patrickswell, Limerick.*—Mr. Boxwell's catalogue is really the list of "Bee-keepers' Supplies" issued by the A. I. Root Company, of Medina, Ohio, U.S.A., for which company he is the "Wholesale Representative for Great Britain and Ireland." We need hardly say it is a very comprehensive list of bee-goods of all kinds—such as are used in America—and in this sense it has a special interest of its own, being different from all other catalogues of appliance manufacturers located in this country.

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

H. S. S. (Birmingham).—*Treatment of Bee-stings.*—We are not cognisant of any special paper dealing with the treatment of bee-stings. Remedies and antidotes of various kinds have been advised and recommended from time to time, but no special one seems to meet with general acceptance, in view of the fact that what may afford relief in one case is utterly useless in another. As a general rule, those who take to bees and bee-keeping use no remedy whatever, they simply remove the sting by scraping it from the wound with the finger-nail, take no further notice, and in five minutes, probably, forget they have been stung at all.

EVERTON WATTS (Yeovil).—*Starting Bee-keepers' Association.*—There is no B.K.A. for the county of Dorset. But as Yeovil is in Somerset, why not write Mr. Jas. Brown, Bridge-street, Bristol? That gentleman is hon. secretary of the Bristol, Glos., and Som. B.K.A.

GEORGE DOW (St. Mary Cray).—*Drones in March.*—It is most unusual to have drones in a "very strong" stock in March. We should take first chance to overhaul the combs, as it is rather probable something is wrong.

Badly-made Hives and Appliances.—A correspondent writes as follows:—"I have been very unfortunate in the purchase of bee appliances, and shall be glad if you can help me in this matter. I have only kept bees a year and a half, and up to now have made my own hives, but not being able to do so any longer, I ordered a 'W.B.C.' hive from ——. It was badly made, and I wrote to say so, and it was changed for another, which is not much better. The roof does not look water-tight, while the entrance is only ¼ in. high, and the body-box is very rough indeed. The 'W.B.C.' section-racks also are badly made, there being no wedges at side of sections, and not sufficient space round ends of the hanging frames for bee-passage. Then the tin separators or dividers are badly nailed on, so that they bulge out, and the dummy has no border-piece, but is flat, thus allowing no bee-space next the sections. I shall be glad if you can tell me where I can get reliable hives, as I cannot afford to throw away money on such as I have described. Thanking you for your help in other matters which you have given me through your valuable paper."

[We omit name of manufacturer, of course, though it appears in the "copy," but it is very regrettable that appliance makers will send out hives to which the above description can possibly apply. It is unjust to all concerned, including "W.B.C." himself, to have appliances designed to meet certain requirements, yet utterly fail to do so, owing to bad workmanship. Though quite against our rule of not naming specific dealers to the exclusion of others, we have in the above case sent privately the name of a reliable firm who can supply the right article.]

J. E. H. (Aldridge).—*Open-air Feeding in Spring.*—1. On no account do we advise open-air feeding for bees in spring. In the hands of beginners this method of feeding tends very much to induce "robbing," a thing to be very carefully guarded against when bees begin foraging in spring. 2. It will be quite safe to place the combs containing unsealed honey in the brood-nest for present use.

T. MARSHALL (Nottingham).—*Bees Leaving Hives in Wintry Weather.*—It is advisable to prevent the direct rays of the sun shining in at hive-entrances when snow is on the ground. A shade-board placed sufficiently far way as not to impede the bees' flight, is the best remedy for preventing them coming out to perish on the snow. Turning the hives right round would only increase the mischief.

**** *Replies to several Queries are unavoidably held over till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

FINEST HONEY, in 28-lb. tins, 50s. cwt. F. WOOLDRIDGE, Chippenham, Wilts. L 26

STOCKS of BEES FOR SALE, 2s. per frame. F. WOOLDRIDGE, Apiarist, Chippenham, Wilts. L 25

GUARANTEED pure HONEY, 1-lb. jars, 7s. 6d. doz. GEORGE THOMPSON, Helpringham, Heckington. L 29

FIRST-CLASS SECTIONS, glazed and wrapped, packed in cases of 4 or 5 dozen. What offers? BARTLETT, Witney. L 22

WANTED, EXTRACTED HONEY (English) in bulk. Sample and lowest price to SHORTHOUSE, Pershore-road, Birmingham. L 34

QUEENS, 5s.; NUCLEI, 7s. 6d. Introductions for weak, Queenless Stocks. DAWKINS, Sutton Coldfield. L 32

WHAT OFFERS, 50 lb. Sections Heather Honey? WILLIAM PITT, Embleton, Christon Bank, R.S.O., Northumberland. L 30

FOR SALE, pure ENGLISH HONEY, 6d. lb., in 10-lb. and 28-lb. tins. G. REYNOLDS, Eaton Ford, St. Neots. L 35

CHAMPION BREED COLLIES, or Lady's GOLD WATCH, EXCHANGE for Bees, Honey, or Appliances. ROSS, Barkerland, House, Dumfries. L 24

WANTED immediate OFFERS for 2 cwt. excellent CLOVER HONEY. Cash or deposit; sample free. W. BENNETT, 11, Grecian-street, Lower Broughton, Manchester. L 31

QUEENS FOR SALE.—I shall have for sale at the end of March, some GOOD LAYING QUEENS at 3s. each. WM. LOVEDAY, Hatfield Heath, Harlow, Essex. L 33

EXCHANGE pure ANCONA COCKEREL (Chance's), value 10s., for Standard Frames and Foundation, or Gearing for Guinea Extractor. P., Kettlewells, St. Albans. L 23

SECTIONS, 5s. dozen. Light colour, SOFT CANDY in glazed-top Boxes, 6d. lb., 6 lb. 2s. 9d., 12 lb. 5s. in G.E.R. crates, eight 2-lb. or four 4-lb. cakes, 4d. lb. LING, Shady Camp, Linton, Cambs. K 30

STRONG STOCKS IN STRAW SKEPS, 1901 Queen, 12s. 6d. each; ditto in 8 and 10 Standard Hives, 1901 Queens, 27s. and 30s., with super; guaranteed. WOODS, Normandy, Guildford. L 28

FOR SALE, 8 STOCKS of HEALTHY BEES; 4 in skeps and 4 in boxes, well provisioned with food. Must be cleared by 25th inst. Price 10s. each; safely packed. Further particulars, R. BROWN, Somersham, Hunts. L 27

BREACHWOOD GREEN APIARY, Welwyn, Herts. Established 1865. Queens; Fertile, English, and Italian, raised as advised by the most prominent bee-keepers. Price from 5s. to 12s. 6d. Order Swarms now for May, June, and July. Bottled Honey in ½ lb. 1 lb. 2 lb. and 3 lb. Comb Honey in 1-lb Sections. Split Cane for Straw Skep making. Prices on application, W. W. PRYOR.

FIVE good STRONG STOCKS of BEES FOR SALE, Standard frame hives. Must be sold; offers. STABLER, Sunnydale, Shildon. L 20

WENSLEYDALE PRIZE HEATHER and CLOVER HONEY in bulk; offers. HORN, Bedale, Yorkshire. L 17

PURE ENGLISH HONEY, 7s. per ½ cwt. Tins free. Sample, 2d. Cash or deposit. RICHD. DUTTON, Terling, Essex. K 56

PLANTS and TESTED SEEDS of Honey-Yielding FLOWERS from private gardens. Splendid collection. List free. RUSSELL OAKLEY, Christchurch. K 87

SUPERIOR BEES.—Good STOCKS for spring delivery. Also SWARMS in their season. JOHN WALTON, Honey Cott, Weston, Leamington. K 80

WANTED, SECTIONS, best quality, perfectly clear and saleable. W. CHILTON, Polegate, Sussex. K 69

HOW to Secure LARGE YIELDS and the Greatest Profit from BEES. Post free of S. SIMMINS, Heathfield, Sussex. J 9

BUFF ORPINGTON EGGS, from good birds on grass run, 5s. for twelve; carriage paid. W. J. SHEPPARD, King's Head Hill, Chingford, Essex.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Thursday, March 20, Mr. T. I. Weston being voted to the chair. There were also present Miss Gayton, Major Fair, Rev. W. E. Burkitt, Colonel H. J. O. Walker, Messrs. R. T. Andrews, D. W. Bishop-Ackerman, W. Broughton Carr, W. H. Harris, J. H. New, W. J. Sheppard, and the secretary. Letters of apology for non-attendance were read from Mr. F. B. White (Vice-Chairman), Hon. and Rev. Henry Bligh, Dr. Elliot, Messrs. H. Jonas, W. F. Reid, P. Scattergood, E. Walker, and C. N. White.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz:—Mr. J. J. Forster, Glen Apiary, Laxey, Isle of Man; Mr. O. Puck, Darenth Lodge, Chingford.

The report of the Finance Committee gave particulars of receipts and expenditure to date. A number of payments were authorised, and the report approved.

The Insurance Committee reported that they had met on several occasions since the last meeting of the Council. The mass of correspondence and other details to be dealt with had occupied considerable time, and a further meeting was contemplated, after which they proposed to lay their proposals before the Council for approval or otherwise.

A request for a grant of medals and for the services of a judge and examiner on the occasion of the Royal Counties Show at Reading in June next was received and agreed to.

Correspondence between the secretary and the principal of the Horticultural College was read to the meeting, and dealt with by the Council.

The next meeting of the Council was fixed for April 17.

ANNUAL MEETING.

At the annual general meeting of members which followed Mr. T. I. Weston was again voted to the chair, and in addition to those named above there were also present among others Mr. T. Bevan, Mr. G. H. Morrell, M.P., and Mr. H. G. Morris.

A letter was received from Mr. Cowan conveying his kind regards to all present, and his good wishes for a successful year to bee-keepers. Letters were also read from Mr. F. B. White (Vice-Chairman) and Mr. J. H. New, declining nomination as members of the new Council. The resignations were received with many expressions of regret, and thanks for the past services rendered by both the gentlemen named.

In moving the adoption of the report and balance-sheet for 1901, the Chairman referred to the valuable work, especially that of an educational nature, carried on by the Society, which he thought deserving of greater support. He urged upon every member the duty of making an effort to secure additional subscribers. The motion was seconded by Mr. Andrews, and carried unanimously.

A vote of thanks to the retiring Council and officers was passed on the proposition of Mr. Ackerman, seconded by Mr. Bevan.

Colonel Walker moved that the thanks of the Society be accorded to the Council of the Royal Society for the Prevention of Cruelty to Animals for the gratuitous use of their boardroom for committee and other meetings. This was seconded by Mr. Carr, supported by Mr. Weston, and carried unanimously.

The President, Vice-Presidents, hon. members, corresponding members, treasurer, auditor, and analyst were re-elected in accordance with the rules, upon the motion of Mr. Weston, seconded by Colonel Walker.

The following were duly elected as members of the Council for the year 1902-3:—Mr. T. W. Cowan, Mr. R. T. Andrews, Hon. and Rev. Henry Bligh, Mr. R. C. Blundell, Mr. W. Broughton Carr, Dr. T. S. Elliot, Major Fair, Miss M. L. Gayton, Mr. G. H. Morrell, M.P., Mr. H. G. Morris, Mr. W. H. Harris, Mr. H. Jonas, Mr. O. Puck, Mr. W. F. Reid, Mr. P. Scattergood, Mr. W. J. Sheppard, Mr. E. D. Till, Lieut.-Colonel H. J. O. Walker, Mr. E. Walker, Mr. T. I. Weston, and Mr. C. N. White.

Mr. G. H. Morrell, M.P., thought it was desirable, if possible, to formulate a standard for honey, in view of the fact that the industry now suffered materially in consequence of the great quantity of deleterious stuff now sold as honey. An improved market was wanted. It was not enough to produce honey, but a means should be devised to secure an increased consumption. In Oxfordshire it was hardly possible to obtain more than about 9d. per section for comb-honey. He would also like to see in future reports of the Society recognition of the work being done by County Councils.

In the opinion of Colonel Walker, the sale of members' honey could hardly be undertaken by associations. He agreed with Mr. Morrell that the County Councils, or some of them, were accomplishing much in promoting apiculture, and he thought the future of bee-keeping very largely depended upon the support accorded by these public bodies.

Mr. Carr foresaw great difficulties in any attempt to secure that only pure honey, or honey of one standard, should be offered for sale. The analysis of honey was a very difficult and expensive matter. He welcomed Mr. Morrell as a member of the new Council, and thought they would all be glad to have his advice and help on matters affecting the welfare of the industry in which so many were now interested.

CONVERSAZIONE.

The members and friends reassembled at

5.30 for the usual conversazione, and after partaking of light refreshments Colonel H. J. O. Walker was voted to the chair, and opened the proceedings by calling on Mr. H. Edwards, of Sunningdale, to show his "swarm catcher and self-hiver."

Mr. Edwards then rose, and, in introducing to the notice of the company his new swarm-catcher and self-hiver, explained that the particular appliance on the table did not actually represent the "catcher" as it would be sent out this season. Instead of providing three parallel strips which, attached to the floorboard, raised the hive proper, so as to accommodate the "catcher," to put which in place it was necessary to lift away the body-box, he, acting upon suggestions offered at the Dairy Show, was now providing two wedges (exhibited)—one for either side of the hive—the use of which demanded that only the front of the hive need be raised in order to enable the hive to receive the "catcher," which slid in, and was kept in position by rebates cut in the wedges. In order, then, to bring the hive level, blocks, corresponding in thickness to the thickest end of the wedges, had to be inserted under the back legs. Whilst this was perhaps an advantage from the user's point of view, it imposed a little more difficulty upon the manufacturer, seeing that it was necessary for the "hiver" box to stand quite level. Another alteration he had made was that, instead of equipping the "hiver" box with four shallow depth frames, the utility of which was, perhaps, doubtful, he was now merely providing plain bars, with a groove in which a starter of foundation could be fixed. Proceeding to describe the action of the appliance, he drew the attention of the company to the sharp angular projection at the front, which served a double purpose. It deflected or guided the incoming bees into the side tunnels, through which entrance was obtained into the hive, and which, as would be noticed, were entirely open at both ends, the nether ends reaching about halfway into the hive. Commenting upon the utility of this "free and open" feature, he said the company would readily appreciate how difficult it was for a laden bee to squeeze through the openings cut in excluder zinc, whilst with the free entrance now provided, the obstruction to incoming bees was practically *nil*, seeing that, though the nether ends of the tunnels were comparatively small in size, it should be remembered that the streams of bees were in one direction only; consequently, no congestion of traffic could occur. The second purpose served by the triangular projection was that it served to guide queen and drones to its apex, above which a cone-protected hole communicated with the "hiver" chamber above. The front slide was for the purpose of releasing the captured drones if desired, also for allowing a young queen to leave the hive for mating purposes; and in connection therewith he mentioned a peculiar feature he had noticed as indicating the likelihood of the issue of a swarm. Whilst when swarming was not anticipated, the drones caught in the "hiver" chamber were allowed to perish, he had noticed that when their services were about to be required for the fertilisation of young queens, either in the case of swarming or of supersedure, the worker bees would feed and care for the drones in their prison house. This feature, then, was an indication, generally, that a swarm might be expected. The use of the sheet of glass covering the frames in the "hiver" box was for the purpose of ascertaining whether the queen had actually been trapped when a swarm issued. If the roof of the appliance was removed as a swarm was issuing, the queen, being attracted by the stronger light, would soon be seen running over the frame tops in her eager search for an outlet; but as soon as her presence was manifest, the roof should be replaced, which would have the effect of sending her to seek an avenue of escape at the excluder-protected slide, where, being so close to the actual entrance to the hive, the bees of the returning swarm could scarcely fail to find her. A failure in this or any other respect had yet to be recorded. Replying to questions, Mr. Edwards said it might be desirable for out-apiaries, where a swarm might be left to itself for a week or more, to equip the hiver box with four or more standard frames, but that was a mere detail of manufacture. His aim had been merely to ensure that the swarm should not be lost, and to this end the appliance had been kept of a size that was neither bulky nor ugly. It was possible to make the "hiver" of any size or capacity required.

The great advantage of the wedges over the fixed bars was that in the former case the catcher could be fitted on without lifting the body-box.

Messrs. Carr and Weston approved the contrivance, the latter expressing an opinion in favour of fixed bars instead of wedges, notwithstanding the benefit pointed out by the constructor.

A general conversation ensued, during which Mr. Edwards said he did not intend to exploit the appliance himself, but to have a few made, and then let bee-keepers enjoy whatever advantage there was in it.

The Chairman and Mr. Reid, in complimenting Mr. Edwards, remarked that the invention was a near approach to a perfect swarm-catcher.

Mr. Dawson—on being called upon by the chairman—showed his new "feeding-stage and winter-passage." He apologised, as a comparative novice in bee-keeping, for addressing "past masters" in the art; but sometimes even a good suggestion emanated from a beginner, and he wished to show his idea of what a feeding-stage should be. He thought that during the winter time, and, in fact, at all times, bees should be disturbed as little as possible for feeding or other purposes,

and he believes that his plan would secure that. At any rate Mr. Carr and Mr. Lee, who had both seen the invention, thought it was not quite a foolish thing. The speaker then exhibited his combined feeding-stage and and winter-passage, and explained the details thereof, a description of which, accompanied by illustrations, appeared in the B.B.J. of March 20, page 117.

Messrs. Reid, Weston, and others discussed the merits of the "Feeder," and ageed with the Chairman in acknowledging its simplicity and usefulness, while thanking Mr. Dawson for showing the appliance to the meeting.

Mr. Knight, who was next called upon by the Chairman, said that through the courtesy of Mr. Carr he had the privilege of being present at the meeting, for he was not a member of the Association. He was, however, a beginner in bee-keeping, and had designed a simple thing in the shape of a cover for hive-roofs, samples of which he produced for inspection. It was made of a kind of cardboard, and only required to be tarred or painted, when it would resist the roughest weather and afford a perfect protection from rain or wet. The covering could be lightly tacked to the roof, or by passing a cord over the top of it, with a weight at each end, both cover and roof would be made quite secure. The latter course would, no doubt, be preferable, because, while equally secure, it was more easy of removal.

Mr. Knight also showed samples of boxes, along with one for sending 1-lb. jars of extracted honey by rail, made from corrugated cardboard, holding respectively one, two, four, or six sections. He, in addition, described a folding box (for sending out in the flat) made in cardboard with a small unbreakable window of transparent celluloid to show the comb.

These several articles being designed for the use and advantage of bee-keepers were—through the courtesy of the Editors of the BEE JOURNAL—to be included in the "Novelties for 1902."

The compartments in the several boxes shown were removable, so that the boxes could be sent in the flat. Mr. Carr specially approved of those folding boxes with the transparent celluloid or mica windows; he understood they could be sold very cheap, and would fill a known want.

The Chairman also expressed his thanks to the inventor for showing the exhibits.

(Remainder of Report in our next issue.)

BERKS BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting was held in the reading-room of the Abbey Hall, Reading, on February 24, F. B. Parfitt, Esq., J.P., in the chair. A good number of members were present.

The annual report, read by Mr. D. W. Bishop-Ackerman (hon. secretary), showed that the year 1901 had been a very successful one for the Association. The membership had increased, additional expert work had been done, and the bee-van had been engaged for a longer period than in 1900. By the latter means, along with more ecomical management, the finances of the Association were now in a better condition than had been the case for many years past. The statement of receipts and expenditure showed that the deficit of £25 at the commencement of the year had been converted into a balance in hand of nearly £7.

The chairman proposed the adoption of the report, and congratulated the members on the healthy condition of the finances. He looked forward with much interest to the future work of the Association.

The report and balance-sheet having been adopted, the president, H.R.H. Princess Christian, and the vice-presidents were re-elected and the council elected for the ensuing year.

A discussion took place on the proposed insurance scheme for bee-keepers now being formulated by the British Bee-keepers' Association, in which many members took part, the general impression being that the scheme at present was in a crude state, and did not sufficiently differentiate between large and small apiaries.

The hon. secretary sketched out the work of the coming season, including the "Royal Counties" Show at Reading, on June 10, 11, 12, and 13 next; the proposed bee van and expert tours for the Berks T.E.C.A. County Council and the general expert work among the members of the Association. A cordial vote of thanks to the chairman concluded the meeting.

Mr. H. Edwards, Sunningdale, Berks, afterwards exhibited and explained his queen-raising apparatus and "swarm-catcher," in which the members present were much interested.—*(Communicated.)*

ESSEX BEE-KEEPERS' ASSOCIATION.

EXTENSION TO SUFFOLK.

A general meeting of the members of the Essex B.K.A. was held at the Devonshire Hotel, Bishopsgate-street-without, London, on Friday, March 21, under the chairmanship of Mr. T. I. Weston, to discuss the question of extending the Association so as to include the county of Suffolk. Owing to the fact that it has long been a subject of remark that the county of Suffolk, possessing as it does a flora and climate favourable to the production of some of the best honey in the kingdom, and that it has not for some years past possessed any association to encourage and direct its bee-keepers, the meeting was called to endeavour to arrive at the best means of effecting this object.

After discussion, it was proposed and carried that the title of the Essex B.K.A. be altered, and that it be known in future as the Essex and Suffolk B.K.A., and that any bee-keeper residing in the county of Suffolk should be eligible to join and participate in the advantages of membership, under the existing rules and regulations of the Association, for an annual minimum subscription of 5s., and cottagers 2s. 6d.

It now only remains for the bee-keepers in the county to come forward and send in their names as soon as possible to Mr. W. J. Sheppard, hon. secretary, Essex and Suffolk B.K.A., Chingford, Essex, so that arrangements may be made for the expert to commence a round of spring visits to the apiaries of the members as early as possible, it being understood that such visits can only take place when a sufficient number of subscriptions are received to pay the expenses in each locality. —W. J. Sheppard, Hon. Sec. Essex B.K.A., *Chingford, March* 22.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4730.] With the last week of March we pass the vernal equinox, and, according to the almanack, have entered into spring. But however comforting to our thoughts, unfortunately the weather is anything but spring-like; frosty nights with cold and showery days have prevailed during the past week or ten days, and for a fortnight previous the weather was—though dry—dull and foggy as November, so far a very poor month for the bees. The crocuses have passed away almost unvisited by bees. The arabis and palm-willow is, however, bursting into bloom, and yesterday (Palm Sunday) I noticed village lads with buttonholes of palm in full bloom. It is gratifying to read in "Echoes" that the weather has been ideal for bees in some parts, and those who live in fruit districts should be prepared for the opening harvest which will soon be with us. Here, in our comparatively late district, we have no prospect of any surplus before June, so that although in the south of England we have no incentive to hurry our bees into abnormal activity by stimulative feeding. Those located in earlier districts should endeavour to get their bees in the pink of condition ready for the first honey-flow. No one can write to meet all the various requirements of individual bee-keepers; the best we can do is to give general instructions and hints of where and what to do, and how to do it the application must be left to the individual.

Foul Brood.—The fact that bees, if fairly strong in the spring, with a good fertile queen, may overcome foul brood (if not too far gone) in a good honey season arises, I think, from the continual incoming of pure untainted honey from the fields, with which the brood is fed. Pure natural food would, no doubt, give greater robustness to the young bees, and ensure greater immunity from disease. The only drawback to this "self-cure" is the chance that another spring the bees may use honey for feeding brood from cells imperfectly cleaned out by the bees the previous season, and by this means develop the disease the following year. The plan I consider most likely to complete the cure would be the removal of the outside combs, and giving full sheets of foundation as the season advances; then, if the natural income is insufficient, feeding with medicated syrup in the required quantity to carry on the work of comb-building and brood-rearing, but not to store. By this means a new set of combs can be obtained with the minimum risk of infection. No doubt each stock would require careful watching. All old combs removed should be melted down, and any honey in them should be thoroughly boiled before being used as bee-food. The frames also might be boiled before using again, or, better still, burnt, and new ones used.

Out-Apiaries.—I am sure all bee-keepers are indebted to our friends, R. Brown and Allen Sharp, for their "notes" on above. My own out-apiary consists of some seventy hives—an increase of about twenty during the past few years. "Does it pay?" Well, I keep it going year after year, so my readers may rely on it that it *does* pay. I do not "bike" (I am almost ashamed to say), neither do I keep a horse and cart to work it. I fear the latter would absorb a goodly portion of the profits. I manage to get all my racks of sections taken to the apiary, and the same conveyed home, when full, by our carrier's van. By this means I get a load of honey home for 1s. 6d. or 2s. when the carrier is going my way. Sections intended for use at the out-apiary are got ready by my good wife at home, and tied in parcels ready for the carrier. These are taken up in the morning, and I go myself to see they are handed carefully, and, perhaps, put the lot on the hives. In the swarming season I employ a man to watch for and hive swarms in straw skeps. These swarms are carried to my place some two miles, ready for dispatching to customers. I myself attend to all hives that have swarmed, as required, shortly afterwards. —W. Woodley, *Beedon, Newbury.*

BEES *v.* POULTRY.

COMPARATIVE PROFITS.

[4731.] Replying to your footnote to my "Echo" (B.B.J., March 13, page 108), I now send account of my bees and fowls. I began the year 1901 with thirty-two hens and three cockerels, and kept a strict account of all expenses for meal, corn, &c. Being no novice at poultry-keeping, I determined to do my best to see what profit I could make from it in the year. I have a capital range for my fowls, and by the second week in May had 140 healthy chickens. These were sold to the "Higgler," who takes most of my eggs. I also hatched a few more chicks in August. Then, having kept account of all eggs used in the house, I reckoned up and found my receipts for eggs and chicks amounted to

	£	s.	d.
	£18	6	8
Expenses for food	15	1	5
Total profits... ..	£3	5	3

My bees I joined up to eleven stocks, *i.e.*, nine single and one "Wells" hive, which latter I count as two. These hives received the best attention I could give them, with the result that they yielded over 700 lb. of excellent surplus-honey, in about equal quantities of comb and extracted honey. As regards quality, I only sent thirteen exhibits to shows, and was awarded eleven first prizes and two seconds. I have also sold every pound of it, except what is reserved for our own table. I could also have disposed of much more if I had got it. I pay carriage on most of my honey, so it makes expenses appear rather high; but it was a pleasing task to count up my receipts, which are as follows :—

	£	s.	d.
Total sales of honey	22	6	3
Outlay (foundation, honey-jars, &c.)	7	1	8
Net profits ...	15	4	7

From the above statement it will be seen whether bees or poultry are the most profitable for a working man like myself to keep. Both departments were kept on strict business lines, but prices for eggs and fowls were low, as I have to sell to a "middleman" who collects them for selling again. With honey, 6d. per lb. is the ruling price, but some of my best I sold at 8d. per lb. The value of my prizes were not counted in, nor were my expenses of the shows, so these items have to balance each other.

With a good season I hope to do some more exhibiting this year. I must also add that I owe my success in beekeeping entirely to the B.B. JOURNAL and the "Guide Book." I think it is folly to try to keep bees without the help of the JOURNAL.—WALTER TURNER, *Brent Leigh, Lavenham, Suffolk, March* 24.

[We are much indebted to our correspondent for his excellent results as a bee-keeper. It should afford a useful lesson in comparing poultry farming with bee-keeping when both pursuits are conducted on such simple lines as are available to every working man who is located in a suitable district for bee-forage.—EDS.]

SOME SPRING FLOWERS.

"A flower is not a flower alone;
A thousand thoughts invest it."

[4732.] Flowers are always beautiful, and should we ever fail to appreciate the grace and loveliness of even the meanest of them it is only because Nature is too bountiful of her beauties, and scatters them before our overburdened sight with too lavish a hand. Perhaps this is why spring flowers are doubly prized. Not only are they lovely in themselves, many of them being exquisitely beautiful, but they come at a time when Nature is only just wakening from a long period of torpidity, and their number and variety are not so overpowering as when later they are almost countless. The merry trill of the lark when it first finds its voice is we know but a prelude to those "profuse strains of unpremeditated art" we soon shall hear; and the opening love-taught warblings of the thrush thrill us with a joy which its later "floods of melody" can scarcely impart. The first swallow skimming over the pool; the cuckoo's welcome monotone when first heard; the appearance of the first white butterfly as it dances by in the bright sunshine; the bees' merry hum as they undertake their first prospecting tour; the earliest buds opening, even though imperfectly—all these cheer the heart of old and young, because we know they are prophets of delight and mirth, harbingers of spring's joys, and heralds of yet gayer hosts. They all tell us that winter's stern rule has closed, that spring's mild radiance is with us, and that soon summer's full fruition will once more be ours. Now we feel the cheering power of spring, as Nature responds to her balmy presence and opens up to a new birth. The ethereal mildness of the vernal air acts on animate and inanimate creation, for once again it is full of life and vivifying soul. "Smiling nature's universal robe of green" brightens the sweet face of the landscape late so brown and sere, and fair-handed spring—flowery-bosomed spring—paints the meadows with delightful bud and bloom, so that in our walks the "rapturous eye" hurries from joy to joy, while the delicious breath of the lambent air makes life a pleasure—

"Green leaves and blossoms, and sunny warm weather,
And singing and loving—all come back together."

Perhaps no flower that blooms has received more laudatory notice from poets than the day's eye, or daisy—our Scotch gowan, and the fair Marguerite of the French. From Chaucer downward, each seems to have vied with the

other in singing its praises. Two points in particular have engaged their attention—its modesty and its continuous blooming. It is a "wee modest crimson-tipped flower," a "simple rustic maid" which "lifts its unassuming head in humble guise." Chaucer fondly sings of it—

"Then love I most those flowers white and red
Such as are called daisies in the town."

In regard to the second trait countless bards declare "The daisy never dies," for it "Smiles upon the lap of May and twines December's arms." "That constellated flower that never sets" blooms all the year round. "It opens with perennial grace and blossoms everywhere," and we find "It welcomes every changing hour and weathers every sky."

March is generally a month of boisterous wind, so it has a flower which emphasises this circumstance, for the anemones got its name of wint or "wind flower" from an old superstition that it could bloom only when the breezes loud and shrill were blowing hard. It appears in March, but more frequently it is a fit crown for April's fair but changeful brow. Then it makes each slope a garden glen, and grows abundantly by banks and braes. The flowers are sometimes a pure white, though they generally shade off into a pale pink, and at times into a delicate crimson; but the Alpine variety has a flower of a brilliant blue and grows far up the slopes of some of our towering pens—a gem when found, but that is seldom.

Two flowers are inseparably connected in my mind with Wordsworth—the Pilewort or Lesser Celandine (*Ranunculus ficaria*) and the "dancing Daffodil." The first grows profusely in March, as soon as the gentle breezes bring news of winter's vanishing. It is a gem as the sun shines on its star-like form. It spangles the lea with its bright glossy golden blossom, and raises its head gracefully but not glaringly, for it has a touch of modest gentleness. It comes as a prophet and herald of a mighty band. It is spring's harbinger amongst flowers, and comes before even the thrush has a thought about its nest, so that we can say of the little humble celandine, "Spring is coming, thou hast come." Wordsworth praised it perhaps more than any other flower, and in naming it *his* flower I have high authority, for he himself wrote of it:—

"There's a flower that shall be mine,
'Tis the Lesser Celandine."

The daffodil, his second favourite, is another fair flower of early spring, which Shakespeare says "comes before the swallow dares, and takes the winds of March with beauty." At times they grow in great profusion, and Wordsworth sings of seeing "ten thousand at a glance." The picture should be read in its entirety, and then we also cannot but feel gay in such a jocund company—

"For then my heart with pleasure fills,
And dances with the daffodils."

The snowdrop is *the* herald of spring flowers—

"Already now the snowdrop dares appear,
The first pale blossom of the unripened year,
As Flora's breath, by some transforming power,
Had changed an icicle into a flower;
Its name and hue the scentless plant retains,
And winter lingers in its icy veins."

F. E. J. S.

INFLAMMABILITY OF CELLULOID.

[4733.] Allow me to call your attention to some experiments on the inflammability of celluloid lately carried out at Aberdeen University, and which are commented on in a leading article of the present issue of the *Queen*, from which it appears that this substance takes fire at a low temperature, burns with almost explosive force, and is most difficult to put out. The above is of interest to those bee-keepers who use celluloid queen excluders, as by using a smoker they run a great risk of losing their stocks by fire, not to speak of personal injury to themselves.—A DUMFRIESSHIRE BEE-KEEPER, *Thornhill, N.B., March* 17.

DECOY PLACES FOR ATTRACTING SWARMS.

[4734.] I would like to ask any reader whether he has been able to adopt or find out a simple method which he can recommend of inducing or attracting swarms to settle in such a place or position as will render the swarm easily accessible for hiving purposes; or, if after swarms having settled in some high tree they have adopted any device for taking them down which does not necessitate climbing? I have read of American bee-keepers hanging up a scented bush to attract swarms, and would like to know if any of your readers have found a similar device efficacious. I am anxious to know, because when my bees swarm they have a habit of going into the top of high trees, and the hardest task I have to do in my apiary is to have to climb these high trees and draw up a weight of 175 lb. to a height of 40 ft. or 50 ft. to take down a 4 lb. swarm.—L. QUAYLE, *Glenmay, Isle of Man, March* 16.

IS HONEY POISONOUS?

[4735.] The enclosed cutting is from the *Worcester Daily Times* of the 12th inst., and, I think, is most unfair on our local bee-keepers. It is headed "Poisoned by Honey," and reads as follows:—

"There was a lengthened inquiry at the Bird-in-Hand Inn, Hagley, on Tuesday, before Mr. Alfred Hebbert (Deputy Coroner), touching the death of Albert Mann, aged fourteen, who was employed as a stable-boy at Pedmore Hall. Mrs. Mann, the boy's mother, said when her son came home on Monday evening, the 3rd inst., he told her he was ill, and in reply to her question said he had given Woodcock, the coachman at Pedmore Hall,

2½d. for some honey, and that he ate it all and it made him ill. Woodcock gave an absolute denial to having sold or given the deceased any honey. Dr. Lowe, who was called in, said the lad told him he had partaken of about half a big-cup of honey on the previous Monday. There were some people who could not take a teaspoonful of honey without being knocked up by it. Cases also had happened where the bees had gathered the honey from poisonous plants and it had caused toxin poisoning. Dr. Lowe also added that on Saturday, the day he died, the lad underwent an operation to save his life, if possible. The operation was for peritonitis, but the post-mortem showed the lad had appendicitis. This had been latent, and if there was anything likely to induce sickness and diarrhœa it would intensify the disease and cause death. The jury, after a rather long consultation, returned a verdict of 'Death from natural causes,' and said they did not think Woodcock or Prosser had anything to do with the lad's death."

I am anxious to answer it in the papers, and should feel much obliged if you could help me with any facts of value on the following points:—1. Is any poisonous honey gathered in England? or abroad? 2. Are there really any people with whom honey does not agree? I would thank you for any hints that would help me.—JOHN P. PHILLIPS, *Spetchley, Worcester, March* 14.

[1. While not going so far as to declare that all honey "gathered in England" is free from deleterious properties, we unhesitatingly assert that no one was ever poisoned through eating honey gathered by bees in this country. 2. There is no doubt that honey does, though perfectly wholesome and health-giving, not agree with many persons, just as is the case with various other articles of food. With regard to the Press cutting quoted above, it is altogether misleading to use the heading quoted, when the verdict was "Death from natural causes."—EDS.]

Obituary.

Major George Campbell, 1st Liverpool Regiment, whose death occurred from dysentery, at Middelburg (Transvaal), on the 4th inst., had recently completed his forty-first year. He joined the 8th (King's), January 14, 1880, his successive steps being—Lieutenant, February 9, 1881; Captain, November 5, 1887; and Major, November 27, 1898. Recently he had been Adjutant of the Southport Volunteer Battalion of his regiment.

Major Arthur William Pack-Beresford, Royal Artillery, who died from enteric at Bloemfontein on the 5th inst., was in his thirty-fourth year. He joined the service on February 16, 1887; became Lieutenant on the same date in 1890; Captain, September 1, 1897; and Brevet-Major, November 29, 1900. He went out early in the war as a Special Service Officer, serving successively with the South African Light Horse and Roberts's Horse, and at this period was severely wounded, but also mentioned in despatches. He had been subsequently employed with the South African Constabulary since November 4, 1900.

[The above obituary notices—from a recent issue of the *Standard*—have a melancholy interest for readers of the BEE JOURNAL in the coincidence of both gallant officers passing away within one day of each other and both being good bee-keepers and regular readers of the B.B.J. Major Campbell will, no doubt, be well remembered by many for his useful and practical contributions to our pages, the last of which appeared in our issue of June 27 last year (page 251), and was headed "My Experiences After Four Years of Experimenting." A most useful article it was, too, well worth reading. In the same issue Major Campbell advertised his bees and bee-appliances for sale—"Owner leaving the country." This was just before he left for South Africa, but his B.B.J. was regularly forwarded by post. The same with Major Pack-Beresford; indeed, it was only the other day the paper was returned through the post marked "Deceased."

We tender the sincere sympathy of all readers of this journal, along with our own, to the sorrowing relations of the deceased officers, who died in the performance of a patriotic duty and in a worthy cause.—EDS.]

Queries and Replies.

[2813.] *Selecting Stocks for Raising Queens from.*—I should be very grateful if you could give me some explanation as to a few points on which I am not quite clear. 1. Is it a sign that those colonies which are strongest at present are the best for queen-rearing and drone-breeding purposes; or should those which gave the greatest weight of surplus last year be chosen, notwithstanding their being weaker, on account of their having an old queen? 2. Should the drone-brood be divided into the several nuclei, or can it remain in the hive selected for drone-breeding, and this even if the nucleus was placed some distance, say, 100 yards from the other hives? 3. I am sending you with the same some samples of candy. Would you kindly give me your opinion of them? No. 1 is made without flour. No. 2 is mixed with pea-flour as prescribed in the "Guide Book" sample and contains a little honey. No. 3 is made with five parts of sugar and one of honey, with the rest, as prescribed in first edition of "Guide Book." 4. In the sixteenth edition of "Guide" I find no mention of salicylic acid. As I have still

½ lb. or so at hand, I should, of course, wish to use it.—THE PROCURATOR, O.S.B., *Buckfastleigh, South Devon, March* 15.

REPLY.—1. The colony that makes most progress in building up to a full colony ready for early work in honey-gathering is, as a rule, headed by the best queen, and should therefore be selected for queen-rearing purposes. 2. The selected drones are reared in the parent hive. 3. No. 1 sample is good in *colour* and *grain*, but has been overboiled, and is too hard in consequence. No. 2 is a very good sample of soft candy. No. 3 is not suitable for bee-food at all compared with soft candy; it is neither more nor less than "hardbake," as hard as a stone. 4. Salicylic acid is not mentioned in the later editions of "Guide Book" because other and better remedies have been recently discovered. 5. Soluble phenyl as advised for use on page 167 of "Guide Book," may be had from Messrs. Morris, Little, & Co., chemists, Doncaster, at 6d. per small bottle.

[2814.] *Dealing with Foul Brood.*—I have sent you two pieces of comb for inspection. My own idea is that there is no foul brood in samples sent. Will you kindly let me know if I am right? I have been three years trying to make a proper start in bee-keeping, but find myself as far off to-day as ever from making any headway, although I spent about £10 last year on bees, appliances, &c. I had a so-called bee expert to put things in order for me at the end of last season (this was after another "bee-master" (?) had made a mess of it), and everything has been left as the first-named expert gave orders for me to leave it. To-day being warm, and not seeing so many bees on the wing as I fancied should be, I made an inspection, and, to my astonishment, I found that instead of having seven good stocks as expected, there were not enough bees to make one decent colony; so I shall have to make still another start. This time, however, I shall manage the hives myself and take no notice of those so-called bee-masters. I feel sure I can keep things right with the aid of the "Guide Book" and the B.B.J. I am a member of the —— Bee-keepers' Association and get the monthly journal from the Association as well. Hoping I am not giving too much trouble and waiting an answer in the B.B.J.—F. J. RICHARDS.

REPLY.—We have, advisedly, omitted the name of the bee-keepers' association sent, being unwilling to see, perhaps, undeserved blame put upon it, knowing, as we do, that the executive of the county B.K.A. referred to are beyond reproach. We therefore ask:—(1) Has any complaint been made to the hon. secretary with regard to the alleged mischief? and (2) What are the names of the "so-called experts" or "bee-masters" to whom our correspondent alludes? If we are informed on the above two points we shall be in a better position to judge with regard to the mischief complained of. For the rest, we may say there is sufficient foul brood in the two large pieces of comb sent to infect a whole district; in fact, both pieces are absolutely rotten with disease.

[2815.] *Taking Bees to Canada.*—I purpose going to Canada soon, if I can dispose of my farm and home here, and I should be glad to know if it is possible to take a lot of bees with me, or do you think I could get them in Canada? 1. My intention is to locate in one of the North-West Provinces, and shall stay at Winnipeg until I have found a location likely to suit me. I thought it might be possible to take, say, three or four frames of bees, with a queen, fixing the frames in a box with perforated zinc at top for ventilation on the voyage out; or would I be able to get a stock of bees there? I shall have a good bit of luggage with me, in addition to wife and two small children. Can you give me the address of any bee-man out there? It will help me very much. 2. I shall greatly miss the BEE JOURNAL, but hope to still have it sent if at all possible to afford extra postage. I have been greatly benefited and helped by the cordial spirit of brotherhood in which Editors and contributors write.—A. A., *Colgate, Faygate, Horsham, March* 17.

P.S.—3. I notice that some of my bees have on their bodies small red insects. Last autumn I noticed the queen had four or five clinging to her, and I had quite a difficult job to get them off her with a match. I was afraid it would have destroyed her fertility, but she is laying all right, I see.

REPLY.—1. In view of the fact that bees of every strain can be readily procured in Canada, it would be entailing needless trouble and risk to attempt taking "a lot of bees" to the far North-West. We are posting you a copy of the current number of the *Canadian Bee Journal*, which will doubtless help you. 2. The B.B.J. is posted to Canada at same rate as at home—viz., 6s. 6d. per annum. 3. The "red insect" noticed is a bee-parasite known as the *Braula cœca*, or blind louse.

[2816.] *Overdosing Bee-food with Naphthol Beta.*—When making 4 lb. of sugar into flour candy to-day I accidentally poured too much naphthol beta solution (No. 1 of "Guide Book" recipes) with it, a bare tablespoonful. Will you kindly tell me if this would do harm to the bees if I gave it to them, or is there anything I can do with the candy?—GLADYS, *Devonport, March* 15.

REPLY.—You should use the overdosed candy by melting it down in the next boiling, and thus bring the proportions into something like the proper quantities. Do not give it to the bees as it is.

[2817.] *Utilising Swarms with no Increase.*—In Simmins's "Modern Bee Farm" he advocates the following line of procedure when not desiring increase of stocks through

swarming. "When a swarm comes off remove all the stock combs (but one or two) and place them in a new hive, then hive your swarm on the remaining two (of course, seeing that no queen-cells are left on *them*), filling up the hive with frames fitted with full sheets of foundations then after the young queen in the *removed* comb is hatched and laying, join both together, first deposing the old queen." 1. I would ask, Is this a safe method to follow? 2. Mr. S. also advocates forming nuclei (if wanted) with the remaining combs of the old stock, with queen-cell to each, on the *eighth* day after swarming. I purpose doing this with one of my swarmed stocks this season, and propose making up three nuclei of three combs each out of the removed combs, leaving the tenth comb for swarm to start with. Do you think this plan would work all right? 3. Please say if on separating the combs to form the three nuclei they could be placed alongside of other hives (with the view of uniting *to them* later on) without danger of the bees deserting the nuclei to go back to old stand where they had been for the eight days previously? 4. Is there any other plan to mark a queen than by clipping off a part of the wing?—J. H., *Old Cumnock, Ayrshire.*

REPLY.—1. We see no reason to doubt the safety of the method. 2. Knowing Mr. Simmins to be a thoroughly practical man, we think that, if properly carried out as instructed by him, his plans of working will accomplish what he claims for them, even though our personal experience of his methods may be *nil.* 3. If carefully watched (as all nuclei need to be) no harm will follow, but small nucleus colonies are far best when kept apart from strong colonies in a warm corner quite by themselves. They are so easily "robbed" out when being fed if prowling hungry bees are close at hand.

[2818.] *Bee-keeping in California.*—I am informed that you could give me useful information respecting bee-keeping for profit in California, where I purpose settling as a fruit farmer shortly. I would there ask, What are the prospects, and what outlay would guarantee a profit of £100 a year at prices ruling there? I have never kept bees, but am very much interested in them, and shall make myself quite conversant with the subject before leaving England. I have a friend at Edgware who has fifteen to twenty hives, and seems to be very successful with them. I should like to know of any good bee-literature which you think will be useful, so that I may feel somewhat independent when I get right away. Thanking you in anticipation.—H. WILLIAMS, *Haverstock Hill, March* 3.

REPLY.—Instead of venturing upon any "guarantee" with regard to the profits of bee-keeping in California—of which occupation we have no personal experience whatever—we are posting you a copy of a Californian bee-journal of the most "pushful" and up-to-date type. In it you will see what is possible in some parts of that very wonderful and interesting part of the world, which, among its many beauties, possesses miles upon miles of bee-forage.

Echoes from the Hives.

Icklesham, Rye, East Sussex, March 21.—Up to to-day (21st) the month of March has been all that a bee-man could wish. Except for one or two days, the sun has shone brightly for several hours, and all day at times. To-day, however, has been very rough indeed. Snowdrops and crocuses are nearly over, but birdseye and purpureums are in full flower, and in some places the palm willow (*Salix caprea*) is fully out, and bees are very busy on it and hazel catkins. Unless we have a return of cold weather, the hedges, woods, and fields will be one grand garden of bee-flowers, such as delights the hearts of the young who have not yet tasted the cup of bitterness. How delightful it is to watch their smiling faces and hear their merry chatter at such a time as this! Yesterday my old bee-friend—the one who first put me on the road to success—paid me a visit, and I think it was a treat for both of us, for the bees were at their best, carrying in loads of pollen, and we wondered where they could get such an abundance of pollen from. As we chatted my friend asked with a smile, "Do you remember your first frame-hive?" "Rather!" I replied. I have never seen bees so strong in numbers in March as they are this year, but I believe in leaving them all ten frames in brood-chamber.—HENRY CLARKE.

Myers'-road West, Great Crosby, Liverpool.—In the beginning of 1901 I lost all my three stocks of bees, like a great many others in this district. I started in the following Easter week with two fresh stocks, and they have done very well. One hive, which did not swarm, gave me just 60 lb. of extracted honey, and the other sent off a good swarm early in July, and I also had from it 32 lb. of extracted honey, besides a second swarm, which issued nine days after the first. I returned this swarm, after cutting out all the queen-cells, and in February of the present year I found this stock was turning out dead bees for nearly three weeks. They have plenty of candy, in boxes with glass tops, so that I can see the bees without disturbing them. 1. I am sending some of the dead bees cast out for your opinion as to the cause of death. This old stock (headed by a last season's queen, of course) is in a "Wells" hive, and the swarm is in the other compartment of the hive, but the latter is only casting out a very few dead bees.

I take the B.B.J. and also the *Record*, and

find them most useful. I have sold £5 4s. 2d. worth of honey and wax in 1901. I do not think that amiss for two stocks.—JESSIE ROWLANDS.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

B. WALKER (Kirkby Stephen).—*Naphthol Beta Solution for Bee Food.*—One tablespoonful of the solution (No. 1 in "Guide Book") is the right quantity for medicating 10 lb. of sugar made into syrup. The solution should be stirred into the syrup while the latter is still hot. Full directions for making the solution are printed on the packets as sent out from this office.

W. WILLIAMS (St. Briavels).—*Bee Nomenclature.*—The bees sent are of the common or native variety. It is as usual to see bees more or less differently marked in one hive, as it is for children of the same family to have hair of different shades.

A BEGINNER (The School, Bromsgrove).—*Starting Bee-keeping.*—Your query is rather difficult to make out. But if, as we suppose, your question means "Is it best to start with a stock of bees in a skep and transfer to a frame-hive in April, or begin with a swarm in May?" our advice is choose the latter course, *i.e.*, begin with a swarm and do no transferring at all your first season.

CHI BETA (Newmarket).—*Making Bee Candy.*—Sample No. 1 is best and is fairly good.

J. GOLDTHORPE (Shipley).—*Home-made Extractors.*—If the cylinder you have by you allows of a cage large enough to take the "Standard" frame, it will work if the outer face of comb is two or more inches away from spindle. It is advantageous, however, to have the comb being extracted as far away from the central pivot as may be. Your letter was mislaid, hence delay in reply.

BURY (Caerleon, Mon.).—*Cross-built Combs—"Clipping" Queens.*—1. There is no remedy but cutting out the cross-built combs and tying them into the frames with tapes. This is a job requiring some experience of bee-work before it can be safely undertaken, as there will be some brood now in the cells, besides having to secure the combs from falling out of the frames after straightening. 2. The heath sent is the common ling. 3. We do not advise "clipping" queens, except under special circumstances. In your case, however, it would be advantageous.

T. S. HOOLE (Sutton).—*Drones Living Through Winter.*—If the drones have been "tolerated in the hive all winter," as stated, and the colony has a young and fertile queen at its head—with worker-brood on four combs in March—it is a very unusual and interesting instance of the truism that "bees do nothing invariably."

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F. B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor, Bee Journal," not "Manager."

A. ROBERTSON (Dumbarton).—Dead bees (only two in your case) are of no use in diagnosing foul brood. The three cells of sealed brood contain healthy larvæ in the proper stage, so that we are enabled from the latter to say there is no disease in the hive referred to.

D. R. (Yorks).—There is foul brood in the incipient stage in sample of comb sent.

HENRY RUSS (New Southgate).—There is not a trace of brood, foul or otherwise, in comb sent, and consequently no cause whatever for alarm.

T. CROOK (head gardener, Hall Court, Botley).—The piece of worker comb sent is perfectly clean, wholesome, and quite free from any trace of brood or disease of any kind.

B. B. (Yorkshire).—There is neither "dead brood" nor "foul brood" in comb. In fact, nothing in cells but pollen; some of it mildewed or mouldy.

W. B. P. (Lancaster).—The remains of dead larvæ look suspicious, but with such a small amount of *material* (*i.e.*, small portions of a couple of dead larvæ) to judge from, a tedious microscopical examination is necessary. We will, therefore, give result next week.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

FOR SALE, 3 strong STOCKS BEES in Skeps, 12s. each; take 35s. lot. BRUCE, Ely, Cambs. L 56

FOR SALE, 6 STOCKS BEES (3 hives, 3 skeps), strong; £4. RAPLEY, Sole-street, Cobham, Kent. L 49

FIVE STOCKS BEES, Skeps, cheap to clear. J. MEPPEM, Burgess Hill, Tonbridge. L 41

HONEY FOR SALE (light colour), EXTRACTED, in 30-lb. tins, 6d. lb., on rail. M. PHILIPPS, Eastone, Oxon. L 36

PURE EXTRACTED HONEY, sample, 2d. Also STOCKS of BEES for disposal, prices moderate. E. WOODHAM, Clavering, Newport, Essex. L 56

GUARANTEED PURE HONEY. Tie-over Jars, 1 lb., 7s. 6d. doz. G. THOMPSON, Helpringham, Heckington. L 55

STRONG STOCKS in Straw skeps. 1901 Queens, 12s. 6d. each. Guaranteed healthy. WOODS, Normandy, near Guildford. L 46

PURE CYPRIAN and HYBRID STOCKS on frames. Strong, healthy. Also QUEENS, 5s. WOOSNAM, Newton Abbot. L 43

THREE STOCKS of BEES in bar-framed hives, accessories. £2 or offers. PARKIN, Bondgate, Helmsley. L 39

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

CONVERSAZIONE.

(*Continued from page* 123.)

Mr. Reid called attention to a remedy he had discovered for bee-stings, and that, he submitted, would be interesting to all who had to deal with bees. He was quite aware that everybody would say, "Oh, here's another of 'em!" for there certainly had been several specifics of the kind, most of which were partial failures. He had tried his own cure very carefully, and thought he could claim success for it; but there had been such a run upon him for the article from his neighbours, friends, and acquaintances that he hoped no one would come to him for it. Nevertheless, he quite realised that, after mentioning the subject, he ought to give his brother and sister (especially his sister) bee-keepers an opportunity of profiting by the "find." The antidote in question was a very simple material, prepared for rubbing on the skin. The poison of the bee consisted mainly of two constituents. One of these, which caused the intense pain of the sting, was of an acid nature, mainly formic acid, and the application of a little ammonia, or a moistened crystal of soda sometimes gave relief. The other substance injected by the bee when stinging was a strong physiological poison of an albumenoid nature, and closely related to the poison of venemous snakes. It was this poison which caused the swelling, and was the source of danger. Any remedy which would render the sting largely, if not entirely, innocuous would be hailed with satisfaction. In his own household there were two members who strongly objected to bees because of their aggressive powers. Since last summer they had used it, and the swelling had subsided in their case; but he was bound to say that the action of the substance was not invariable, because in two cases where it had been applied the swelling continued, in spite of the rubbing. He did, however, claim it as an almost certain remedy for the bites of gnats and midges. He gave some of it to a friend who was visiting Norway for fishing, and he declared that he would as soon think of travelling there without his rod and line as to go minus the anti-sting specific, which rendered the mosquitoes harmless.

He (Mr. Reid) had been stung several times this spring. Ten minutes' rubbing and the swelling was gone, while formerly he suffered severely. He had had the ingredients made up in a form (like a menthol cone) suitable for bee-keepers to carry about. He could not himself supply it, but Messrs. Sanger and Son, of 2, Winsley-street, Oxford-street (druggists' sundriesmen), who had worked it up from his (Mr. Reid's) formula, were prepared to do so. It would be known as "Resa," and all he now asked was that bee-keepers would let him know the result of their experience of it.

Mr. Carr rejoiced at the discovery, which had a personal interest for him, because some members of his household—while heedless of bee-stings—were martyrs to the bites of mosquitoes and gnats, plentiful each year in the neighbourhood of Blackheath.

Mr. Dawson hoped Mr. Reid would do all he could to promote the circulation of his remedy as soon as possible. It was, in his mind, "worth a guinea a box!" He knew the terrors of Norway and Lapland in the summer owing to mosquitoes.

Mr. Reid reminded them that gnats would not appear for another month or two.

At this point, Colonel Walker—owing to a prior engagement—retired from the chair, and Mr. Reid assumed the presidency.

Mr. Edwards then exhibited samples of a new "postal and introduction cage" for queen bees, which he called his "observatory" cage. In construction it was simply a small block of wood with two transverse and one longitudinal holes bored completely through it. There was more wood left at one end of the cage than at the other, and the longitudinal hole at this end served as the candy-chamber, the end of the hole being closed with a wafer of cork. The hole at the opposite end was for inserting queen and attendants, and this was then also closed with cork. Bored in the side of the cage, covered by wire cloth, would be seen a small hole which communicated with the candy-chamber, and this to some extent was the "essence of the invention." The cage containing the new queen was placed on the hive, and once there need not be touched for a week, and whilst the bees of the hive had free access to the candy at once, the smallness of the hole was such that, as soon as the candy was eaten away to a certain depth, the body of a single bee sucking at the sweets blocked up the opening; consequently, some time must elapse before the food was eaten away, and in the meantime bees and queen were getting familiarised. He believed that by the use of this cage queen-introduction could be made almost a certainty—in fact, he was offering for this year what no one had yet attempted—namely, to guarantee safe introduction for a nominal fee of 6d. The "observatory" feature—a piece of mica secured to the back of the cage—allowed the progress of matters to be watched without any interference with or disturbance of the hive—the cause, probably, of many failures in queen-introduction.

The Chairman thanked Mr. Edwards on behalf of his hearers, and said that the remark of that gentleman regarding the insurance of safe queen-introduction brought another subject to his mind which concerned the insurance of bee-keepers against damage committed by their bees. The Council of the B.B.K.A. were engaged in working out a

scheme of that kind. They were spending a great deal of time on the matter, especially in getting information from Germany on schemes already in existence. He would, therefore, give a short outline of the position of affairs at the present moment. The idea was that bee-keepers should be insured up to a moderate sum, say £30, against damage done by their bees outside their own apiaries. Consequently, it was not proposed to include in the policy compensation for damage done to the insurer or his domestic animals, which would be too much to expect. The Council had reason to believe that this insurance to the maximum extent of £30 could be effected at the rate of 1d. per stock with a minimum payment of 6d., which all would agree was a nominal figure. The way in which it appeared possible to effect this was through the members of the county associations, who should hand in their names to the local secretaries stating the maximum number of stocks in their apiaries or which they expect to have at any time during the season. The association secretaries would then forward to the B.B.K.A. their lists of members with the numbers of stocks, and, last but not least, the amount of the insurance fee. That is the only plan on which for so small a premium as 1d. per hive the proposal could be organised at all. The scheme he had sketched appeared to be a feasible one, and the Council had already, he thought, received sufficient names in support of it to guarantee its adoption. A great number of letters had reached Mr. Carr and Mr. Young from bee-keepers throughout the country, who were not members of county associations, but who felt an interest in the proposal. It might be said that these persons ought to be members of associations, but it must be remembered that some counties had no associations, and the conditions were such that it was not easy to form any. It would, therefore, manifestly be hard lines if the local bee-keepers were not allowed to participate in the insurance scheme ; besides, the larger the number of insurers, the more likelihood there was of a low premium being maintained, or even reduced. It had been debated as to whether the Council could not admit such outsiders (he used the term inoffensively) to the scheme for a definite minimum payment of 1s., or, say, perhaps, double the fee of a county association member. That point was, however, a difficult one to deal with, and the Council were still engaged in discussing it. He believed also that some Irish members, in spite of their predilection for managing their own affairs, were anxious to come in, but as they would not be affiliated with the B.B.K.A. they therefore could not participate in these benefits. It was much better for the generality of bee-keepers to pay a small premium, and receive reasonable compensation. Mr. Weston had done excellent work in getting information together bearing on this subject from all quarters, and he would add any details which he (the Chairman) might have inadvertently omitted. At any rate, they would both be pleased to answer questions or listen to suggestions. He had not been deputed by the Council of the B.B.K.A. to address the audience on this matter, but nevertheless felt sure that that body would be glad to have the views of the conversazione.

Mr. Bishop-Ackerman (representing Berkshire) said that the insurance scheme had been discussed at the annual meeting of the Berks B.K.A. the other day, and the majority thought there was not enough distinction made between keepers of one or two hives and owners of large apiaries. It was considered that if the owner of two hives paid 1d. for each, the possessor of 200 ought not to pay so much proportionately, on the ground that large apiculturists knew how to, and did, take more care of their bees than small ones, and consequently their stocks were not likely to be so troublesome as in the case of small ones.

Mr. H. Edwards said one member at the meeting in question was very strong on this question. It was calculated that Mr. W. Woodley would have to pay something like 16s. 8d. per annum, while there was very little risk of any outside damage arising from his bees, he being thoroughly up in the art of controlling them. On the other hand, another bee-keeper owning a single hive of very irascible bees, cases of which he knew, the penny would not cover his risk.

The Chairman pointed out that 6d. was the proposed minimum amount of any one premium, and asked how many apiaries of even 100 hives existed in Berkshire.

Mr. Ackerman said there were some, but apiaries of even fifty or sixty hives were contemplated by the objectors. However, if the minimum amount of premium was to be 6d. the case was different, and would, no doubt, modify the impression entertained of it by their members.

The Secretary (Mr. Young) said the maximum benefit and minimum premium were stated on the circular sent out.

Mr. Edwards asked how he could declare the number of his hives when he split his surplus queens up into nuclei?

Another gentleman asked, Must a bee-keeper with fifty hives insure all the lot, or would he be allowed to insure one half of the number?

Mr. Weston, as a member of the committee appointed to deal with the subject, rose to answer the questions put. He prefaced his remarks by thanking the B.B.J. for its world-wide circulation of information on this subject. A German gentleman had written a letter in reference to a bee insurance scheme existing in his country. Upon being communicated with, this gentleman put him (Mr. Weston) in touch with various insurance societies over there, who had forwarded particulars of their *modus operandi*. In Germany all bee-keep-

ing had to be conducted according to certain regulations, as was the case with most things there, so that persons who undertook the insurance of apiaries knew beforehand exactly the conditions under which the bees were being kept. It must be borne in mind that in England no regulations of the kind existed, and that everybody kept his bees as near the public highway as he chose, and in every other respect as it suited him. Obviously, under conditions of the kind imposed in Germany insurance premiums could be much less than they must be here. In his hand he held particulars of the rates charged in Switzerland and Germany, which were 4 or 5 pfennigs per hive, or about the twenty-fifth part of $11\frac{3}{4}$d.—an average of about $\frac{1}{2}$d. per hive. It was evident that this could not be worked except through the bee-clubs in Germany, which were scattered all over the country. Every man belonged to his club, and each club insured, perhaps, twenty or thirty members, each member owning perhaps twenty or thirty hives. The club took out a single insurance, which saved an infinity of trouble, and paid a lump sum per annum. In one case they had to take out an insurance for five years, and then any claims that were made were settled by the club, which was afterwards reimbursed by the insurance company. The latter was generally a company that made a specialty of insuring agricultural material and farm produce, the bee-keeping being a little "extra" tacked on. He thought the minimum of 6d. proposed for this country was too small, because the printing and postages incurred would consume a portion of that fee. He thought the B.B.K.A. would have to add a little item on each transaction towards covering the postage and office expenses—say 4d. plus the 1d. per hive. The parent body was, unfortunately, not in a position to bear the extra strain upon their funds in carrying out the scheme; and it was clear that additional expenditure would be involved. Another point as regards Continental systems was that trivial damage had to be borne by the insurer and not the office. Supposing, for instance, a working man lost a couple of day's pay; therefore "trivial damage" might be interpreted as any loss up to 5s. On that question he would like to know the sense of the meeting.

Mr. Edwards said he thought such a condition would be fatal. Why not make the premiums 6d. and multiples of 6d., which would leave a margin?

Mr. Weston (continuing) said, in reply to the Berkshire representative, that so much per hive, whether the apiary be large or small, must be paid. He admitted that the scheme would be of more benefit to the small than the large man. He himself would rather pay his 6d. or 1s. and be insured. With regard to the number of hives to be insured, that must be settled by the maximum summer count on a certain day to be fixed—he thought Midsummer-day.

Mr. W. T. Joyce said that swarming very often did not begin till Midsummer-day, after which the bees increased very much. If at the end of the summer the bee-keeper should have a good many more stocks than he insured for, what would be the result, seeing that no bee-keeper could tell what swarms he would have after Midsummer-day? Besides, the difficulty would be still greater if he had several nuclei on hand for preserving young queens.

The Chairman fully appreciated the perplexities mentioned, but bee-keepers must endeavour to surmount them by allowing a reasonable margin for possible increase of stocks, or the scheme could not be carried out. This would be no great hardship, as the premium was so trifling.

Mr. Joyce suggested the end of August or at Michaelmas as the starting date when the swarming season had passed.

Mr. Weston did not think that would meet the difficulty, because some bee-keepers would then have more, and some less, stocks than at Midsummer. Those who were likely to have additional swarms should pay an extra 2d. or 3d. on their premiums.

Mr. Dawson imagined that if any particular date were fixed, it might be still open to him to send in extra pennies should his apiary become enlarged.

The Chairman again pointed out the danger of trying to introduce too many stipulations in the policy, which would vitiate its inception. There were a large number of bee-keepers who did not increase their stocks and had no wish to do so, and many of these would be paying the minimum of 6d.—a greater sum proportionately than that contributed by large bee-keepers.

Mr. Carr said the Committee had most exhaustively studied this subject, and, notwithstanding what had been said that evening, he believed had arrived at the only sound solution of the problem.

The Chairman thanked the members for the expression of their views, which should be taken into consideration by the Committee when discussing the matter further.

A general and somewhat lengthy discussion followed on the subject of technical education in bee-keeping, and the assistance given to bee-keepers' associations by County Councils as "grants in aid" for furthering that object. The general opinion of those present seemed to be that bee-keepers' associations should endeavour to get into closer touch with County Councils than was the case at present, for—except in a few notable instances—the money spent in promoting the bee-industry—as one likely to benefit the rural cottager or agricultural labourer—was not always expended judiciously, owing to lack of knowledge on the subject on the part of County Councillors themselves.

The Chairman summed up this part of the proceedings by observing that, to his mind, the correct thing to do was for County Councils to work through the bee associations, and where the latter were properly established and organised, no doubt Technical Instruction Committees would recognise that as the safest and easiest way of advancing the work.

The proceedings closed with a vote of thanks to the Chairman.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4736.] *The First Flight.*—The bees seem to enjoy this annual event with a species of hilarious glee. They play high jinks, acting as if they were out for a holiday and meant to make the most of the shining hour. As yet business and sober prosy work are far from engrossing their thoughts. With sportive fun they dance through space as if intoxicated with the joy of once more breathing the free air of heaven. They spin and wheel about in mazy undulations, circling and careering in ever-varying spiral or ellipse. What graceful curves they describe, as they sail aloft in slow and rhythmic cadence, and, anon, what wild gambols they play as, with sportive spurt, they dash on headlong in meteoric career, weaving a network of most intricate gyrations. One bee simply hooks its wings, fills its trachæ with the buoyant air, and floats away without an effort. Another darts off with lightning speed, as if it meant to outrival the swallow in its flight; while yet another makes futile and ineffective efforts to soar, for its flying days are over for ever. Carefully observed, the conduct of each colony in the early flights forms an index to its strength and vitality, as the romping, ranting lot is sure to be in a prosperous condition. I also test their strength at this season by the amount of debris they eject, especially removed capping. During their earliest flights they take advantage of the mild weather for re-arranging their stores, and shifting the position of the cluster. On observing a good, fair amount of this matter thrown down near the entrance, I conclude the stock is strong and likely to be a success. The absence of it, however, does not always indicate the contrary, as it may only imply that they have already abundant stores in the right place. Still, the entire absence of debris, accompanied by dull and lethargic movements, would set the stock down in my mind as one which should be examined on the first favourable opportunity.

Lost! A Bee Library.—The S.B K.A. during its short but not inglorious existence accumulated about seventy volumes of bee books, embracing some of the best literature on the subject. It should be of immense advantage to the pursuit in Scotland if this collection were available for reading or reference. The late secretary hoped to secure them, but I never heard that he had succeeded. Who has them now? and who is entitled to retain them in his possession? It is regrettable if so much excellent bee-literature is to be permanently shut up in some unknown cupboard, "food for worms!"

Quotations.—The first two are from Marcus Aurelius, a philosophic writer of ancient times —(*a*) "That which is not for the interest of the whole swarm is not for the interest of a single bee"; (*b*) "A fleet horse and greyhound do not make a noise when they have done well, neither a bee when she has gathered a little honey." The second two are from a modern writer, Mr. Stephen Phillips, whose latest drama "Ulysses" was published only the other day. Speaking of Calypso's Isle he says :—

> The odorous amorous isle of violets,
> That leans all leaves into the glassy deep,
> With brooding music over noontide moss,
> And low dirge of the lily swinging bee.

And later, where the hero, cloyed and wearied with the amorous charms of the goddess, begins to pine for Penelope and home he exclaims :—

> I am an hungered for that human breast,
> That bosom a sweet hive of memories.

Base Ingratitude.—Mice, like men, display this reprehensible trait, and return evil for good. I am led to this reflection by finding that my tenderheartedness in saving the life of Mr. Mouse, as mentioned in January comments, has led to the destruction of my one remaining skep. In autumn it was placed inside a bar frame-hive partly to shelter it from the winter's storm and rain, but principally with the object of establishing a powerful colony in the frame-hive some time in June from the combined swarm and flying bees The other day I found a pair of mice had made a nest in some wrappings on the top of the skep, and they evidently feasted royally on the honey, as a good part of the works had disappeared. On this occasion I played executioner without the least feeling of remorse.

Early Pollen.—This is scarce with us in March, but the bees are enjoying excellent spells on some thousands of crocus blooms. The coltsfoot (*Tussilago farfara*) is also abundant, and on bright, sunny days bees work on it diligently. It is a profuse bloomer on soil containing a large percentage of lime.

(*Continued on page* 136)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

Mr. Andrews, whose neat little apiary is depicted below, sends us the following notes concerning his bee-keeping:—

"I have been a reader of your JOURNAL for the past thirteen years, and take a deep interest in all that pertains to the craft. The 'Homes of the Honey-Bee' pictures, showing the apiaries, have been very interesting to me, and I have enclosed mine, hoping you will deem it worthy of a place among them.

"I commenced bee-keeping in 1888, when a friend gave me a swarm in June of that year. I hived the bees in a modern or flat-topped skep, from which I took a rack of sections in the first season. The following year I got from that stock a top swarm, followed by a second swarm or 'cast' a few days later; and that same 'cast' made the best stock I have ever possessed before or since. At that time I knew no more about bees than they knew about me, but after they had damaged my eyes in the way of 'putting up the shutters' a few times, I found, if I kept bees, I must learn something about their management, and this I did by reading up the subject. I then commenced to make my own hives, all of them built to take the standard frame. Five of the hives made at that time are seen in the picture; they are all double-walled. I had nine stocks when the photo was taken, but have now reduced them to six. The individual seen between the second and third hive is 'yours truly.' I take a very great pleasure in the bee-keeping hobby, and am pleased to say that, in addition to the pleasure it affords, I find bees always pay for the labour bestowed on them. But I never look forward to getting 100 or 200 lb. of honey per hive, like some of your readers do. I am well satisfied with an average of 30 lb. per stock. I have always managed to keep free from foul brood till last year, when one of my stocks was found to be affected, and it was in consequence destroyed at once. This is not a good neighbourhood for honey, as we have to depend almost entirely on the limes for our surplus. I have found it does not answer to keep old queens, and I therefore re-queen regularly every two years. I seldom lose a stock through adverse weather in winter.

MR. H. ANDREWS' APIARY, EGHAM, SURREY.

"I note that many readers complain of their bees getting the swarming fever, but I am never troubled in this way. My bees seem to be well satisfied with their old home as long as they have room for their labours. I believe in giving them plenty of room. I give that a little in advance of their requirements, and this stops swarming with me. What little knowledge I possess in the craft is always at the service of those who seek it, and this seems to afford equal pleasure to giver and receiver.

"In addition to my apiary I have a large fowl run at the back of my hives, so the fowls and the bees together add a welcome few pounds to my annual income."

(*Correspondence continued from page* 134.)

The catkins of hazel and alder are now in bloom, but I have not seen bees working them. Most early spring flowers, however, are not good pollen-bearers. The first pollen seen carried in was on March 16—a good average date. Weather is again extremely cold and wintry, with showers of sleet and rain. Hill tops are once more robed in white.—D. M. M., *Banff.*

MY EXPERIENCE OF A "FORD-WELLS" HIVE.

[4737.] The BRITISH BEE JOURNAL commends itself very highly to me on account of the articles being, in the main, written by practical bee-keepers, so that all your readers have the benefit of their varied experiences. In that connection I trust a few "notes" on the above subject may not be without some value, although I do not pretend to write as an expert :—I first began bee-keeping forty-seven years ago, but there have been two breaks during that period when circumstances prevented me from indulging in that pursuit, which, in my case, is a recreation. Being rather credulous, I became fascinated with the glowing accounts given in your pages of the results obtained from the style of hive known as the "Wells" or double-queened hive, and I became the possessor of a "Ford-Wells" three years ago, getting it from a first-class maker. Its arrival was the beginning of troubles. First of all it was damaged in transit and had to be repaired. On putting a swarm in each compartment of the hive respectively the bees of half of the swarm put in last joined the first one, whereby the remainder became proportionately weak in bees. Next, when the first rain came, I found the roof leaked so badly that quilts and combs were soaked. I then made the roof watertight and thought my troubles were over, but I was mistaken. In due course it, with others, was taken to the heather, and, on cycling there some time after, I found that the roof and quilts were blown right off by the wind.

The swarm first put in were working as if nothing had occurred, but in the second lot one-half of the bees were non-existent. However, as the frames of the deserted division contained several drawn-out combs and some honey, I put therein a driven lot of bees and gave the latter a supply of food, but on examination in the following spring I found the bees dead. They had apparently succumbed through rain getting in at the roof-fillets. To remedy this defect I had new and deeper fillets put on, and hived another good swarm in the empty compartment in June. This was the season of 1900 and a bad year. The bees did not do much good though they gathered sufficient stores for wintering. In the spring of 1901, however, I found the bees dead from the same cause as before, viz., water again getting in. The first swarm had also suffered severely. As soon as possible I moved the bees and combs into a new hive, and they did splendidly last year. I may say that among other faults the dummy board at the back also got warped, causing a draught between it and the door, and in consequence the bees did not winter well, the mortality during the winter being out of all proportion. From first to last I did not get a single pound of honey from the hive, and my loss was not less than £6. The moral is obvious. —"S.," *Nairn, N.B., March* 29.

THE "DAWSON" FEEDING-STAGE.

[4738.] As many readers of the B.B.J. (since its appearance in print on page 117 of your issue of the 20th ult.) have written asking me to send them the above-named appliance, will you be so kind as to allow me to state, through your journal, that although the inventor of this little contrivance, I do not make or sell it. Messrs. James Lee & Son, 10, Silver-street, High Holborn, W.C., are the makers and sell them at 6d. each.—W. ALFRED DAWSON, *Loversall, Cobham, Surrey, March* 27.

KENT AND SUSSEX B.K.A.

ANNUAL MEETING.

The twenty-third annual meeting of the above Association was held at the office of the B.B.J., 7, King William-street, Strand, W.C., on Saturday, March 22, Mr. E. D. Till in the chair. The attendance was not so good as usual, owing, no doubt, to the inclemency of the weather. The usual formal business was carried out, comprising the election of officers, Council, and representatives to the B.B.K.A. The report and balance-sheet discussed and adopted, regret was expressed that the County Councils for the two counties of Kent and Sussex had not yet seen their way to assist the Association with grants in aid of technical instruction in bee-keeping—a decision which has greatly added to the expenses thrown on the Association, and, in consequence, has increased its indebtedness whilst limiting the Association's sphere of usefulness. Satisfaction was, however, expressed with the work done during the past year, especially with regard to grappling with foul brood. The disease has been appreciably reduced in both counties, but in Kent, where its work has extended over a longer period, only eighty-seven stocks of bees were found affected—a fact that was considered excellent evidence of the usefulness of the K. and S. B.K.A.'s work. In view of the heavy expense devolving upon the Association and its limited means, it was decided that the strictest economy would have to be exercised in order to remove the debt, which had existed now for some years past, and put the Association on a sound business basis. Referring to

the work they were endeavouring to carry out with regard to the debt, the chairman jocosely remarked the debt was a legacy left by those responsible for the Association's management before the present officers took its affairs in hand; and, in fact, the Association reminded him of the servant who, when her mistress discovered a Guardsman in the coal-cellar, replied to the inquiry "How he got there?" by gently hinting that "He was left by the last cook!"

The meeting concluded with the usual votes of thanks.—(*Communicated.*)

NORTHUMBERLAND AND DURHAM BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual meeting of the Northumberland and Durham B.K.A. was held in the Young Men's Christian Association Building, Blackett-street, Newcastle, on March 22. Mr. Fenwick, of Netherwitton, occupied the chair, and there was a good attendance.

Mr. James Waddell, Hon. Sec., submitted the report for the year 1901, in the full assurance that it contained evidence of the continued usefulness of the Association in the support and promotion of apiculture. The weather during the past year had on the whole proved favourable to the production of honey, for which there had been a fair demand. Earl Grey had consented to accept the office of president, and the Marchioness of Londonderry, Mrs. Coote, Mrs. Gurney, Mr. W. A. Watson-Armstrong, Mr. H. Crawford Smith, M.P., Professor Middleton, Mr. R. A. Luck, and Mr. J. G. Angus had consented to become vice-presidents. The Association's finances had come out on the right side. They had at present a credit balance of £5 1s. 2d., and over twenty new members had joined during the year. The report was adopted and officers appointed.

Mr. J. N. Kidd, of Stockfield, then read an interesting paper on "Bee-keeping, Old and New." Mr. Kidd was heartily thanked for his paper, and the meeting concluded with the usual vote of thanks.—(*Communicated.*)

PERSONAL INJURY FROM BEE-STINGS.

HEAVY DAMAGES.

At Limerick Assizes, on March 13, before Mr. Justice Johnson and a city special jury, the case of O'Gorman *v.* O'Gorman was heard. It was an action brought by Patrick O'Gorman, a farmer's son, residing at Gortnalougha, Corofin, County Clare, against Peter O'Gorman and Michael O'Gorman, farmers, of the same place, to recover damages for personal injuries sustained in the month of September, 1900, through bees belonging to defendants.

Mr. Seymour Bushe, K.C., and Mr. Lynch appeared for plaintiff.

Mr. M. J. Bourke, K.C., Mr. Brereton Barry, K.C., and Mr. E. J. Phelps appeared for the defendants.

The plaintiff deposed that the defendants, who are father and son, reside next his place, and kept bees. In September, 1900, he was engaged in front of his father's house tackling a horse, when the bees of a hive belonging to the defendants attacked the horse and himself. Witness was badly stung, as was the horse also, and the animal in consequence began to plunge, with the result that he was rushed by the horse against a low wall a couple of yards off. He was terribly stung about the face and hands, and his back was injured through the contact with the wall. After getting free from the wall he was again knocked down by the horse. Previous to the accident witness assisted his father on the farm, and was the only son there to do the work about the place. He was obliged to go into Ennis Infirmary, and subsequently to the Mater Hospital, Dublin. The accident rendered him incapable of work: his sight became weak, and his head got shaky and dizzy.

In cross-examination by Mr. Bourke, the witness denied that he had met with an accident in the hayfield, nor was it true that when building a rick of hay with a man named Regan he fell from the rick.

The plaintiff's mother and sister gave corroborative evidence.

The father of the plaintiff said he had often complained to the defendants about their bees, which prevented his men from working, but he was only laughed at.

Dr. Fogerty, Limerick, described the plaintiff's condition, and said he was practically incurable, and incapable of any physical work. The man could not stand or walk without assistance, which was due to the spinal cord being injured. From witness's observations and from what he had been told, the accident was capable of producing these symptoms.

For the defence, Mr. Michael O'Gorman, jun., defendant, deposed that the bees belonged to his sister Bridget, and on the day in question, owing to her illness, he was engaged taking honey from the bees, and used all precautions in doing so, having had twelve years' experience in such matters. After he had removed the honey the mother of the plaintiff told witness that the horse had been stung by the bees. She did not say a word about her son being hurt; neither did her daughters. He did not see the plaintiff that day. He got no complaint from the plaintiff, or anyone on his behalf, till April 27, 1901—seven months after the accident took place—when he got Mr. Cullinan's letter. He noticed that in the month of August previous the plaintiff was not in his usual health; he seemed to be "yielding to his back," and he was not working as regularly as before.

Cross-examined by Mr. Bushe—He had not

heard that Mr. Corry and his men had been driven away by the bees. He denied that the plaintiff's mother called on him to look at her son. He and the plaintiff had not been very good friends for some time before this occurred.

Mrs. Hynes, sister of the last witness, denied that she saw the plaintiff on the ground on the day in question, neither did he or any member of his family say he had been injured that day by the horse, and she saw him a week afterwards drawing turf. She first heard that plaintiff was injured some time after he had gone to the County Infirmary.

Miss O'Gorman deposed to having seen plaintiff drawing turf a week after the alleged occurrence. But in the month of August, previous to the accident, she noticed that the plaintiff was weak in his gait.

Michael Regan, junior, deposed to having been loading hay with the plaintiff in August, 1900. Plaintiff was on the cart, and his leg got entangled in the rope and he fell down on his side. Before this, witness noticed that he was not steady in his limbs. That was the second fall he got off a cart.

Dr. Faris, medical officer of the Clare Infirmary, deposed that plaintiff was admitted on November 27, 1900, and remained there to December 22. He complained of being very dizzy and could scarcely walk. Each leg was equally affected. Witness regarded the case as being disease of the spinal cord of some months' standing. He could find no disease of the spine or any trace of external injury. He looked upon the boy as being incurable. The symptoms he observed were not, to his mind, consistent with any injuries caused on so recent a date as September 20, 1901.

Mr. Justice Johnson summed up and put several questions to the jury, who found that injuries were caused by the bees having stung the horse and the plaintiff. They found that the bees were the property of Michael O'Gorman, and were negligently kept. They found plaintiff had not been guilty of contributory negligence, and awarded him £200 damages.

Mr. Barry, K.C., applied for a stay of execution to the next sittings of the Divisional Court.

His Lordship granted the application and gave judgment for plaintiff with costs.

Echoes from the Hives.

Oldbury Wells, Bridgnorth, March 28.—I examined my ten stocks on Good Friday, and am pleased to say I found they had all wintered well, and are healthy and strong, with a good lot of brood in all stages, with every prospect of being ready for a good season's work. In one hive I found a new queen cell with an egg in it which, I think, bids fair for early increase. Wishing all bee-keepers a prosperous season.—J. S. Lanton.

Queries and Replies.

[2819.] *Uniting Bees in March.*—I had a stock of bees in which only drones were being reared. On examining the combs I could find no queen, but saw patches of sealed and unsealed drone-brood, much of it with cappings off. Having by me a "cast" of last season on two frames, rearing brood and doing well, I united the two on Friday last, flouring them well and making a swarm of the queenless lot. They seemed to unite well—no sign of fighting or of any disturbance whatever; but on Sunday, about midday, the enclosed bee was found in front of the hive. 1. Will you kindly tell me if enclosed bee is the fertile queen or drone-breeder? 2. If she is the fertile queen, will the bees be likely to raise a queen from her eggs (there are drones in the hive)? 3. Or would it be better to divide the stock among my other four? Could this be done without risk of losing the other queens?—W. Rodwell, *Driffield, Yorks, March* 31.

Reply.—1. The dead queen sent, which had evidently been "balled" and roughly pulled about before death, was too dry and hard for post-mortem examination. We cannot, therefore, answer your query. 2. Most probably yes, but you must examine the combs of the "cast" for queen-cells in order to decide the point. 3. We should not upset the other stocks by running any risk in order to save the few bees and the small amount of worker-brood referred to. It will be an interesting experience for you to see if a queen is raised and can be fertilised in April under the conditions stated. Of course, the drone-breeding queen and the bees of the stock are of no use whatever in any case, so we should make no effort to save them.

[2820.] *Transferring Bees to "Wells" Hive.*—Though a bee-keeper for sixteen years, I have only been a constant reader of the British Bee Journal and *Record* for twelve months, and I am often much amused with the letters of some who have only been in the craft a fourth of that time writing about "queen rearing," and dealing with other abstruse subjects quite beyond my reach. I have a "Wells" or twin hive, one compartment of which "went down" about two years ago, and I have worked it as a single hive ever since; and having bought a healthy stock in straw skep, I wish to transfer the bees into vacant end of the "Wells" hive, putting in perforated partition. How early may I proceed? Both stocks are strong. I would like to still retain stock in skep.—J. W., *Yarn, Yorks, March* 29.

Reply.—If you wish to stock the empty

compartment of the "Wells" hive and "still retain the stock in skep," as stated, there can be no "transferring." The only plan is to make an artificial swarm by "driving" a portion of the bees and queen from the skep, and hiving them in the "Wells" hive in the usual way. The bees left in skep will then raise a queen and go on as before.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Le Rucher Belge (Belgium).—Last year a great many death's-head moths (*Sphinx athropos*) were seen. One was taken whose proboscis did not measure less than seven centimetres in length. Maeterlinck is of opinion that they get into the hives by means of their cry, which much resembles that of a young queen. Experienced apiculturists affirm that bees (in skeps) build little pillars of propolis to reduce the entrance if the winter threatens to be severe; they do this only to protect themselves against the intrusion of this huge gourmand, which would soon appropriate a great portion of their winter store. At the close of July a large libellula (*Æschua*), a kind of dragon-fly, made its appearance. It has an immense head, and seizes the bees on the wing. This insect is eight centimetres long, and has very powerful mandibles.

Praktischer Wegweiser (Germany).—A straw hive, still in good condition, was standing empty in the corner of an apiary intended to receive a swarm when swarming time arrived. In the early summer the owner noticed some bees busily employed, as if gleaning and tidying inside this hive; at night they had flown. This continued for several days. At last, as he was sitting in his garden one day, he suddenly heard the rushing sound of a swarm overhead, which flew direct to a large chestnut tree overhanging the before-mentioned empty straw hive, of which they quietly took possession. Some time afterwards the owner found out that a neighbour more than a mile distant had lost a swarm mysteriously, which doubtless had already found out the good empty hive and taken possession as above related.

Leipziger Bienen Zeitung.—Humble bees (*Bombus terrestris*) have been classed amongst the enemies of bees. One may well ask why? The writer, in many years of bee-keeping, never found that they do any harm in any way to hive bees, while, on the other hand, wasps are exceedingly injurious. They are most numerous in autumn, just when the hives have less strength and vigour, and they take advantage of this to rob the bees of their honey. Some years they appear in great numbers and carry away a considerable quantity. Humble bees, on the contrary, are strongest in July and August, when they would have small chance for pillage. In autumn only the queen bombus remains. These might now and then try to creep into hives for shelter, but the bees could always turn them out again without themselves suffering any injury. We often speak of the benefit to fruit trees of the visits of bees to their blossoms; the same is true of the humble bee, and she ought to be carefully protected, lest injury and even extermination should attend her, as is greatly to be feared.

The Same.—"In the month of July," says L. Nieseu, of Dubweiler, "passing by a wood near a coal-pit, I was witness of an interesting spectacle, though to a bee-keeper's mind a very saddening one. A large number of insects, looking at first sight much like common wasps, were flying over a piece of ground about 200 yards square. On closer inspection, however, I soon recognised the bee wolf (*Philanthus triangulum*), and could see under their yellow bodies a black mass hanging, which, on nearer observation, proved to be a honey-bee. The creatures floated over the above-named space of ground, and then dropped suddenly and disappeared. On examining the soil, I found it was composed of coal-dust, left orginally in the form of mud from the washing of the coal, and it was loose and easy to form the excavations in which they live. They are very difficult to kill, and if knocked down they leave their prey and escape. They appear to be armed with powerful forceps, with which it is thought they kill their victims. They do not seem to have any sting (?). They are said to take bees from the very flowers they are working on, or to overpower them when wearied with labour and heavily laden. I saw how continually fresh robbers appeared, each carrying his prey, and on examining the soil I found an immense number of dead bees lying on the black coal dust. No wonder then when hives do not thrive! And this explained the mysterious weakening of our stocks. Next day, armed with a spade, I sought the murderers in their holes. In all their passages were found numberless dead bees—their bodies eaten out entirely, others partially, and in each passage we found four to five maggots of different ages; in some places they were already pupated, and surrounded by quite a heap of the chitinous remains of the bees.

"It is thought that the insect lays its eggs in the body of a bee, the young maggot first consuming that, and afterwards the other dead bees which the careful mother lays up around them.

"As the nests are only a few inches under the soil, could not they be sought for and the maggots dug up and destroyed with some strong fluid as carbolic acid or chlorate of lime?"

From *Die Biene und ihre Zucht.*—Adulterators of honey grow bolder and bolder, even

offering to bee-keepers and advertising in bee journals "Table honey or sugar-honey 10 lb. for 5s." In a Brunswick paper we read:—"Fir honey made from the tips of fir trees and the finest beet-sugar, 2½d. per pound." Here no secret is made that there is no honey in the preparation, and yet the word "honey" is displayed. The *Leipsziger Bienen Zeitung* mentions an advertisement of a "Table honey!" that never crystallises and has a very inviting appearance; price per 100 lb. 55s. Of course, the public imagines this to be real honey, and this evil will continue until the word "honey" is protected by law.

Bienenwirtschaftliches Centralblatt. — A bee-keeper of thirty years' experience draws attention to the fact that last summer (being hot and dry) the bees worked a large field of red clover with great success. What reason can be assigned for this unusual conduct, unless, the season being so dry, the clover may have been much shorter than at other times?

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

S. M. Beaumont (Hyde Park, W.).—*Profitable Bee-keeping.*—Our knowledge of the district of Suffolk around Bury St. Edmunds is that good bee-forage is plentiful, and fairly good results are secured. But when you state that your "average profits have reached £2 6s. per hive" in your former location in the Channel Islands, we cannot venture to promise anything like so good a return in Suffolk.

M. D. P. (Chislehurst). — *Prevention of Swarming.*—The "Rymer" method of preventing the issue of undesirable swarms (described in B.B.J. of November 1, 1900) was specially adapted for the heather district in which Mr. Rymer is located, but not suitable for Kent. You had best, therefore, use the shallow-frame box below the brood-chamber when the hive begins to show signs of crowding; and, as soon as the bees have started building out the foundation and worked down into the box, withdraw the latter and set it above the brood-chamber with a sheet of queen-excluder between. Then, if honey is coming in freely, add a second box of shallow-frames below the first one. This is the simplest plan of stopping swarming, but it needs to attend to ventilation in hot weather by raising the body-box slightly up from the floor-board to allow a free current of air, and so keep the bees from being over-heated.

Jas. Mercer (Feltham).—*Arranging for Bee and Honey Shows.*—Major Fair, Anlaby-road, Teddington, Hon. Sec. of the Middlesex B.K.A., will, no doubt, afford the desired information with regard to a demonstration with bees in a properly-designed bee-tent, if applied to.

Ratio (Leicester).—*Queen-rearing by Beginners.*—You will be saved much labour and probable disappointment by deferring any attempts at queen-rearing and nucleus forming until such time as you have read up the subject fully. It is useless relying upon the few words we can give in this column; a text-book is a *sine qua non* if success is to be hoped for. The "Guide Book" deals with queen-rearing on ordinary or simple methods, but if the artificial "cell-cup" method is to be followed, Doolittle's book on "Queen-rearing," or the B.B.J. containing Mr. Brice's articles on the subject, should be obtained prior to making a start.

W. P. Lloyd (Bideford).—*Transferring to Standard Frames.*—As the frames of your home-made hive are old sized ones we should not attempt to transfer the combs to "Standard" frames. It would make a patchy job at the best, and is beyond the power of "a beginner." Remove the skep now on the top-bars of your frame-hive and examine the latter to see if the queen is breeding well below. If she is, set the skep and bees therein on one side and allow the bees to fly back to the frame-hive, then place the latter on the top-bars of your "Standard" frame-hive, and let the bees transfer themselves by working down into the latter as room is required.

F. Hamshar (Cuckfield).—*Dealing with Starving Bees.*—The brood in comb has died from "chill" owing to the bees deserting it in moving on to other combs in finding food. The dead bees found head-foremost in cells have obviously perished from hunger.

Ignorant Beginner (Taunton).—*Securing Surplus from Skeps.*—If the skeps have flat tops you will only need to get a catalogue from one of our advertisers in order to see how surplus-chambers for working on skeps are made. The method of managing these appliances is fully detailed in "Modern Bee-keeping," price 7d. post free from this office.

E. Oliver (Agneash, Isle of Man).—*A Beginner's Queries.*—1. Seeing that you do not possess even the most elementary knowledge of bees or bee-keeping, it is wasting time even attempting to give any adequate help by brief replies in this column. A reliable guide book must be got and read, otherwise it is useless to hope for success. 2. The feed-hole fixed top of the wooden boxes mentioned will admit bees to the surplus-chamber placed overhead, but it is infinitely better to know how modern bee-keeping is managed than by trying to work on such crude methods.

W. C. (Southport).—Your article on "Doolittle's Method of Queen Rearing" will appear in our next.

Editorial, Notices, &c.

RURAL INDUSTRIES.

CONFERENCE AT WARWICK CASTLE.

In our issue of March 20 last we published a communication from the Countess of Warwick giving particulars of a conference it was proposed should be held at Warwick Castle on May 1. The object was, as stated, to afford an opportunity for persons engaged in—or connected with—any of the various minor rural industries included in the lighter branches of agriculture, to meet in friendly discussion and make known their views on the subject. Thus far the matter had only reached its initiatory stage, but we now learn that the response to Lady Warwick's appeal has been so generally favourable that the conference is not only definitely arranged, but promises to be well attended.

We have just been furnished with the "Provisional Programme of Conference" (*subject to alteration*), which is arranged as follows :—

MORNING SITTING, 11 A.M.

Paper read by Lady Warwick on "An Organisation which shall bind together the Rural and Village Industries throughout the country."

Discussion.

An interval of one hour for lunch.

AFTERNOON SITTING, 2 P.M.

Paper on "Rural and Village Industries."

Discussion.

Papers read : (*a*) Motor Cars.
(*b*) Markets.

Discussion.

As the demand for tickets is considerable, and the space in the conference-room at the Castle is limited, forms will be issued on which applications should be made ; on receipt of these the claims of applicants will be duly considered, but no tickets will be issued until April 21.

Lady Warwick will provide hospitality for the night, in the town, for those attending the conference. The Castle will also be open to view to the members on May 1. Tickets of admission and tickets for hospitality will not be issued until April 21.—EDITH BRADLEY, Organising Secretary, *Lady Warwick Hostel, Reading.*

Each and all of the four papers mentioned above have more or less of special interest for our readers, seeing how much the "rural industry" of bee-keeping has, perforce, to rely upon "organisation," along with favourable railway rates for transit of produce and bee goods, and the importance of arriving at the best means of finding a ready market for British honey. It is to be sincerely hoped that the favourable opportunity now offered will be taken advantage of, and that the generous and thoughtful hospitality provided for those located far away will be appreciated, and early application made for such tickets as remain unallotted. Our desire is that the bee industry may be worthily represented in view of the important and varied items of interest directly connected with bee craft which are included in the above programme.

DERBYSHIRE B.K.A.

ANNUAL MEETING.

The twenty-first annual general meeting of the D.B.K.A. was held on March 1, at the Town Hall, Derby, J. L. P. Barber, Esq., in the chair, R. Giles, Esq., vice-chairman. Among those present were Messrs. S. Poulson, H. J. Morris, G. Pallett, H. Hill, J. Rowland, S. Durose, H. Bollington, J. Bakewell, R. H. Coltman, J. Stone, T. W. Jones, E. Glossop, G. Burfin, E. Swain, and J. Meakin.

The minutes of last general meeting were read and confirmed, after a "rider" regretting that no report on expenditure for dealing with foul brood in the Northern division of the county had been presented as desired. The report showed a fairly prosperous year for bee-keeping.

The total number of beekeepers visited by the experts was 398; 1,251 frame-hives and 239 skeps having been examined. Total, 1,490 against 1,460 in the previous year.

Unfortunately several bad cases of foul brood were reported in the northern division. On the other hand, the southern division shows a decrease of fully 50 per cent. in the number of stocks affected.

The annual show was held on September 11 and 12 in conjunction with the Derbyshire Agricultural Show, and was in all classes well up to the mark.

The election of officers then took place, the president and vice-presidents, with one or two exceptions, were re-elected, as were also the chairman, vice-chairman, and committee. Mr. J. Rowland was re-elected expert for the southern division, while Mr. Bollington takes the place of Mr. Handby (resigned) in the northern division. Mr. R. H. Coltman was appointed hon. secretary, Mr. F. Walker having resigned office.

The chairman then presented the challenge cup and medals won by exhibitors during the year, and the meeting was adjourned till March 27 in the Town Hall as before.

The adjourned meeting was held at 2.30 p.m. The hon. sec. (Mr. R. H. Coltman) presented the balance-sheet, which was adopted. The hon. sec. pointed out that several members had not paid their subscriptions for 1901, the amount due being over £9, thus showing a very unsatisfactory state of things. On the other hand, there had been an increase of sixty new members during the year.

Lectures were arranged to be given at five centres, with a sixth in reserve, Mr. Jones being appointed lecturer.

The local secretaries were then appointed, and the meeting closed with a hearty vote of thanks to the chairman.—(*Communicated.*)

CORNWALL B.K.A.

ANNUAL MEETING.

The annual meeting of the Cornwall Bee-keepers' Association was held at the Town Hall, Truro, on March 26, Mrs. Tomn presiding. Among those present were Miss Tomn, Miss E. Williams, Messrs. T. R. Polwhele (hon. sec. and treasurer), John Brown, expert, and W. Gibson.

The annual report stated that during the past year twelve new members had joined, and about the same number had fallen off. A demonstration and competition for prizes was held at the Royal Cornwall Agricultural Show at Bodmin, but as it was early in the season not much new honey was shown. The bee-tent purchased by the committee was used at Launceston, Callington, St. Veryan, North and South Meneage, Constantine, St. Columb, Redruth, and Mevagissey, and gave great satisfaction. An examination for third-class experts' certificates, under the auspices of the British Bee-keepers' Association, was held at the Royal Cornwall Show, Bodmin; four members entered and three received certificates. The increased interest in bee-keeping in the county is shown by the greater demand for the use of the bee-tent by local flower shows. Several applications having been made to the secretary for grants to agricultural and flower shows, it must be remembered that the grant from the County Council is strictly confined to educational purposes, and therefore cannot be used for prizes. The association, however, is prepared to send its tent and a lecturer to all agricultural and flower shows free of cost, but grants for prizes cannot be made unless applications are received before the annual meeting.

The financial statement showed balance, December 31, 1900, £91 15s. 5d.; grant from County Council, £40 14s. 6d.; subscriptions, £27 13s.; total, £160 8s. 11d. The expenditure included £53 10s. 3d. paid to experts, and the credit balance amounted to £75 2s. 11d. The reports and accounts were adopted.

The following officers were elected for the ensuing year:—President, Viscount Clifden; Committee, Mrs. Tomn, Miss E. Williams, the Revs. J. A. Kempe and A. Boscawen, Messrs. S. H. Lanyon, W. Gibson, A. Curnow, A. H. Wenmoth, G. W. Jevons, T. B. Hender, J. W. Lawry, W. E. T. Bolitho, J. P. Richards, J. Brown, L. G. Campbell, and W. K. Baker; Hon. Secretary and Treasurer, Mr. T. R. Polwhele.

The meeting closed with the usual vote of thanks.—(*Communicated.*)

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of March, 1902, was £2,598.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4739.] With the month of April has come the usual showers and sunshine, though with north and north-west winds bees have not ventured far afield to visit distant woods. Spring in this district is cold and late, and thus the bee-forage available is much restricted. I have supplied artificial pollen daily to supplement the natural income available, and it has been taken to with avidity. I mention this as being stimulative for brood-raising, and when these lines are read a "warm wave" may have caused our bees to revel in an abundance of natural pollen. This may already be plentiful in other and earlier districts. Indeed, there are apiaries within a few miles of me which have an abundance of the palm willow growing near from which pollen is freely gathered, and also some honey on warm days, but such apiaries do not shine for productiveness, though the owners are "experts." I visited an out-apiary the other day some five or six miles off, and found half the hives infested with wax-moth and foul-brood. With regard to wax-moth, it was the worst case I have ever seen. The bees had died out in the early autumn of last year, and the wax-moth had possession in the larval stage. No doubt the large number of moths which matured spread abroad, and must have left a legacy for the bee-keepers of the district to deal with in the coming season. I pity the poor cottager who lives near such centres of real pestilential mischief, and the cottager skeppist is not habitually overhauling his hives, nor does he often know of the havoc these destructive creatures make. When "taking up time" comes a fresh army of moths will have passed on to wreak destruction in other hives not teeming with bees. Our only hope is in vigilance and prompt burning of hive and colony when found. When our friend the Rev. Dr. Bartrum some years ago referred

to this pest as likely to make bee-keeping unprofitable, if not impossible, I had no idea of the mischief it could cause.

Decoys for Swarms.—Mr. L. Quayle some time ago asked if it is possible to attract swarms to certain easy hiving places? At my out-apiary I have light brushwood "bavins" placed in a leaning position against a forked stick, the fork of the stick being rubbed with beeswax. These contrivances attract some swarms every year and are excellent places for securing the bees. I also tie pieces of old worn quilts, waxed and propolised *ad lib.* on some of the low branches of the surrounding trees. I call these "bee-bobs," and they also attract swarms. A straw skep which has been occupied by bees is very useful for the purpose if hung on a strong stake or on the above-mentioned "forked stake" with the short wood bavin leaning on it. But sometimes our "best laid schemes" fail, and the swarm will in "sheer cussedness" betake themselves to the church roof a couple of miles away or to the top of a tree beyond reach of either ladder or "climber."

Insurance Scheme.—I notice Mr. Edwards, at the late conversazione, referred to my remark, at the Berks B.K.A. annual meeting, on the disparity in the amount guaranteed in comparison with the premium paid by the insurer. In my case I should have to pay 16s. 8d. to get £30, but my neighbours, with half-a-dozen hives, get the same amount for 6d. If so, I shall take my own risk, as I have no doubt many others will also who own large apiaries. The outsider will, no doubt, argue differently, and say that bees in a large apiary are more likely to do mischief than in a small one. But is it so in practice? I consider that the bee-keeper who wishes to insure should, for a stipulated sum, secure up to a certain sum as compensation. But the whole thing is so complicated that it will, no doubt, be best to wait till the committee who are dealing with the matter have formulated their scheme, and then bee-keepers will be able to make their own comments upon it.—Wm. Woodley, *Bredon, Newbury.*

SOME ESSEX NOTES.

[4740.] In reply to inquiries I have had respecting my apiary (shown on page 115), I may say the ground on which the hives stand is what is usually called short land, caused by a crooked hedge at a corner of an arable field. The land I occupy is harp-shaped, and on the open side I grow a row of scarlet-runners, which serves the purpose of a screen, and also causes the bees to fly higher than they otherwise would in summer. This helps to prevent flying bees from coming in contact with horses when the field is being ploughed, &c. This year the field is "fallowed," or rested—if frequent turning and harrowing the ground may be called "resting"—but to me it means that horses will be working on the land about every three weeks during the coming summer. I have sometimes got the men to begin work an hour or two earlier than usual in warm weather by a trifling gift, such as a little honey for their breakfast, or a bottle of mead. When they have finished work, this goes a long way towards removing trouble. It is known that horses perspire a good deal when at work in warm weather, and this is sure to cause trouble if bees are about. From personal observation, I can say that bees do not attack animals when the latter are cool and grazing quietly.

One correspondent alludes to his intention of closing the hive-entrances while horses are working near them, but to confine a dozen or twenty strong stocks of bees to their hives on a hot day is a "large (and very risky) order." Besides, if the farmer sends word overnight that his horses will be at work near the apiary on the following day, the weather may alter his plans, or "the grey mare may want shoeing," or a dozen other things may happen. Of course, it is possible to confine a few stocks for a day without harm, if attention is given to shade and ventilation.

Letters in the daily Press about what may be done by cottagers and others in the country are often not only misleading and amusing, but not seldom annoying, and the cause of serious trouble to cottagers like myself. When my health failed and I had to rely upon my knowledge of bee-keeping for the support of myself and family, I experienced the greatest difficulty in hiring a piece of land on which to place my hives. The very small garden attached to my cottage is of no use for bee-keeping.

Going to the Heather.—I recently advertised some spare queens for sale in this journal, and of the very large number of applications for them the bulk came from heather districts. I think this proves that, like all other good things, the production of heather-honey has its disadvantages. Anyway, it shows that a large number of queenless stocks and colonies with drone-breeding queens in the heather districts in early spring may be largely attributable to the late and necessarily great disturbance of the hives in autumn. I daresay readers will note that the queens advertised are already sold, but applications for them continue to come in.

The B.B.K.A. Conversazione. — Having seen the "swarm-catcher" exhibited by Mr. Edwards last autumn, I must say that the appliance referred to is an improvement on all I had previously examined, but there is to my mind still a good deal left to chance in the "catching." It may secure the swarms of bee-keepers who live in towns or their suburbs, but personally I prefer the more reliable *live* swarm-catcher—*i.e.*, the bee-keeper himself.

Mr. Reid's Remedy for Bee Stings.—I once heard it said that the best cure for bee stings is to "get used to them," and there is, no doubt, some truth in this; but if we take

stings themselves as a remedy for the after effects, may we not regard the result as an actual cure for bee stings? No doubt we should have to get stung pretty regularly and often for a year or two before the cure is complete.

Technical Education in Bee-keeping.—While bee-keeping associations would do well by getting into closer touch with the county councils, it appears to me that owners of large estates have it in their power to do much for the advancement of the craft in the locality where their lands lie. It sometimes makes one wonder that this is not done, for both employer and employees would benefit. To teach modern bee-keeping must enlighten those taught, and tend to uplift the scholar. In this direction it is gratifying to learn that a Member of Parliament has been elected upon the Council of the British Bee-keepers' Association.—Wm. Loveday, *Hatfield Heath, Harlow, Essex.*

QUEEN-REARING.

DOOLITTLE'S METHOD.

[4741.] With our Editor's permission, I should like very much to advise those thirty-one bee-keepers who wrote to inquire of Mr. W. H. Brown (4725, page 113) about Doolittle's method of raising queens to buy the book as written and illustrated by Mr. Doolittle, which can be had, I think, in paper cover for 1 dollar, *i.e.*, 4s. 2d. and postage. In it they will find directions down to the minutest detail, as well as heaps of other good things, which are a real "gold mine" to the bee-keeper.

It is utterly impossible in a short article like the one in question, and at second hand, as it were, to do justice to this important subject. I like to re-queen my stocks every year, seeing that everything depends on having a young and vigorous queen at the head of every colony. I have followed Doolittle's method, with a slight modification, for some time. Being on the wrong side of sixty and having to wear glasses, I find it difficult to transfer larvæ. This being so, I start my cells in a queenless stock for from eight to ten hours, after which they are put in the upper story of a strong stock with a queen over one year old below *à la* Doolittle.

Each of my queen-cells is built on a separate peg, and can be handled separately at any time, yet I do not make any artificial cell-cups, nor transfer larvæ, nor do I put "royal jelly" in the cells, as this is done for a start by the queenless bees during the first eight or ten hours referred to above; at the same time, each cell is built on a peg and contains a selected larva of the right age from my best queen.

When about fourteen days old from the laying of the egg I take each cell from the peg on which it was built and completed, and put the cell into a queen-nursery cage, in which it is hatched. The "nursery" in my case is in the form and size of a Standard frame, and contains twelve cages. The nursery containing the cells is then placed in the middle of a queenless stock until the queens emerge from the cells. If desired, you can put the nursery in an upper story, with a queen below, excluder zinc being between; but I find the bees do not feed the young queens, so you will need to put food in the cages in order that the young queens may not starve.

The beauty of this nursery is that you can handle each separate cage and examine the queens, and reject any you think small or faulty; but if carried out correctly you will be surprised at the queens you will get. All these and more details will be found in the book. It is impossible for me to do justice to this important matter, so to every one interested I would say, buy the book. Twenty shillings would not buy mine if I had no chance to replace it.

I have sixteen stocks, and hope to raise twenty or more queens this coming season, get them mated and laying, and after the honey gathering is over, give them to my stocks ready for another year.

I have only touched on a very tiny part of this enthralling and fascinating subject, as I fear you, Mr. Editor, would object to my length if I went on to describe the whole process as I carry it out from beginning to end. —Wm. Carr, 6, *Norwood-avenue, Southport, March* 26.

BEES IN CHESHIRE.

MARKETING HONEY.

[4742.] As I never see any reports with regard to bee-keeping in this part of Cheshire, and, as our Junior Editor is aware, there are capable bee-keepers here (some of whom he was personally acquainted with when resident in Cheshire), it seems to me strange that one or other should not be able to send an occasional report. I therefore now forward a line, which may be useful as bearing on the question of selling honey.

I am pleased to say my four stocks recently cheerfully answered the "roll call" when examined, and are in first-rate condition, being strong in bees, stores, and have brood in all stages. The bees of the original stock with which I started two years ago now cover ten frames, and seem as strong as at any period last summer. Two of the other hives contain "driven lots" I got last September and put on eight frames. I fed the bees up rapidly, and they are now in splendid condition. The other stock is on the full ten frames, and of these the bees cover eight; in this case also they are in good condition and working well. I first saw pollen carried in on February 28, but earlier in the day I had noticed some hundreds of bees working on cut blooms exposed outside a fruiterer's shop

in the town. I was therefore not surprised on arriving home at noon to see mine busy. On Easter Monday they fairly rolled the pollen in, nearly every bee carrying home its load.

I have occasionally seen it stated in your pages the great difficulty some correspondents have in disposing of their honey. Perhaps my experience may therefore be of some use to such. Two seasons ago (my first year with bees), owing to getting them late in June and not understanding how to super them, I got only 6 lb. of honey from my one hive, and as this was dark in colour I only sold a small quantity and used the remainder.

Last season, however, I got 70½ lb. of surplus from my two hives. I am employed at a shop, and every morning have to call at the houses of the neighbouring gentry for orders, and it was my custom to carry a couple of bottles of honey with me and ask the maid to let her mistress see it, and say it was for sale. I had not often to carry the honey back; in fact, on some mornings I got as many as 10 lb. ordered. The consequence was in about a month I had not only sold my own lot, but also some 89 lb. for two friends of mine. I then ceased to push sales, but having a repeat order for 6 lb., I got another three dozen 1-lb. jars from a friend. That was in February, and I have only half-a-dozen left of them, and expect an order for these next week.

I think this shows if it has to be sold it is no use sitting expecting customers to come for it, but let it be known you can supply pure honey from your own bees, and sales will ensue. What pleases me most, one of my customers had been used to buying foreign honey from her grocer's, but after trying one of my jars I have had repeat orders to date of 22 lb. from her.—"EBOR," *Dunham Valley, Cheshire, April 4.*

DEALING WITH FOUL BROOD.

[4743.] I beg to thank you for your "wire" of yesterday—"Foul brood and drone-breeding queen"—surely a double-barrelled piece of calamitous news for me! It has filled me with intensest distress and pain. But instantly recognising my plain duty to other bee-keepers, as well as to myself, I proceeded to the garden within half an hour of the receipt of your "wire." The bees were sulphured, for although it was unspeakably painful, I felt that nothing short of the most drastic measures would meet the case. The quilts, frames, and combs have been burnt, and it but remains to have the brood-nest scorched with a painter's lamp, followed by a few paintings with solution No. 10 in "Guide Book." The scourge is too terrible to admit of either leniency or procrastination, for I dread it like the plague.

I was made very uneasy not long ago when reading last year's volume of the B.B.J. to find that one adopting the initials "J. B.," of this town, sent you a sample of comb affected with foul brood. I know not what the rule of the Editors is in these matters, but I do think that the full name and address of such persons should be supplied to those who apply for them—for reasons obvious enough to enthusiastic bee-men—that there might be "something attempted, something done," as the song says.

I trust these lines may be read by Mr. Loveday (we all wish him better health), for in his "Notes" on page 115 he told us he had "passed a special examination in foul brood." He would probably be permitted more space than could be afforded in the column headed "Queries and Replies." If he will be good enough, I should like to know:—

1. What measures of precaution, if any, against bee-pest he would advise, other than those mentioned in the "Guide Book" (medicated food, naphthaline, strong colonies, cleanliness, &c.)?

2. What race of bees is least susceptible to attack?

3. How long has the disease been raging before the spore stage is reached?

4. As inexperienced bee-men are ignorant of foul brood until the indented, dark, perforated, irregular brood is found, what are the sure signs to the trained expert?

5. How long, as a rule, does the rod stage last?

I should be glad for enlightenment on the above, and, may be, others of your readers may also obtain the same.—WILLIAM RICHARDS, "*Gabalfa*," *Cardiff, April 7.*

THE "FORD-WELLS" HIVE.

ANOTHER BEE-KEEPER'S EXPERIENCE.

[4744.] The "notes" by your correspondent "S." (4737, page 136) of his experience with a "Ford-Wells" hive may be of some value if only they give other bee-keepers the opportunity of stating the results that have been obtained from this hive.

Being the possessor of a "Ford-Wells" my experience may interest some B.J. readers, and especially your correspondent who has failed so lamentably.

I purchased my "Ford-Wells" in the spring of 1898 from Mr. E. H. Taylor, Welwyn, who, I believe, is the sole maker of this hive. The hive arrived undamaged, having been well crated before despatch it was impossible for it to get broken in ordinary traffic. After unpacking, I thoroughly examined it and found neither flaw in the material nor fault in the construction; in fact, it was built of excellent material and the workmanship was of the best.

As soon as the hive was painted (I painted the roof inside as well as outside), I transferred two stocks from single hives into it, and after four successive summers' experience I can say that the hive has worked admirably,

and at no time has one lot of bees left "their compartment, and joined the other." Neither have I found "one lot dead," while the roof, after four years' trial, is still watertight. My lowest "take" from this hive in one season was 80 lb., and that was in the bad year of 1900. I have introduced queens, and raised queens in both compartments, always with success. I have also only once had a swarm, and that was my own fault in neglecting to put the supers on. I find the stocks build up quicker in the spring in a hive of this type, owing to the heat produced by the two colonies enabling me to spread the brood without fear of being chilled. I thus get a strong force of workers ready to take advantage of the first honey-flow.

On examining the hive on April 2 I found seven frames of brood (not patches) in one compartment and six in other, so that there are thirteen frames in all, and only the perforated dummy in centre to separate them, so that it is, therefore, reasonable to think that with April-like progress the bees will be ready for the shallow-frames by the time the apple-trees are in bloom.

If your correspondent will tack a piece of zinc on the roof and make it watertight, and tie the roof on if in an exposed position, get a new dummy board (sliding back wall I presume he means), to stop the draught. Then put a couple of stocks in that have some "go" in them, tier up with shallow frames at the right time, and the bees will fill them if there is honey to be found within two miles —ARTHUR H. HOMERSHAM, *Sturry, Kent, April* 5.

TWO QUEENS IN A HIVE.

[4745.] Mr. Withycombe (E.B.K.A. Expert) to-day examined my stocks, all of which were found healthy and in good condition; but one hive had already hatched out a new queen, and had also some drones, while the old queen was in the hive and still laying. There was a very good patch of brood on two combs and a fair quantity of eggs. He thought this might interest your readers. Is this the first queen to be hatched out in Coronation year? —G. R. ALDER, *Essex, April* 3.

BEE-KEEPING IN MIDDLESEX.

AN APPEAL.

[4746.] Having been appointed Honorary Local Secretary to the Middlesex Bee-Keepers' Association for the Harrow division of Middlesex, I wish to obtain the names of bee-keepers in this district, in order that, if possible, we may hold a local show for honey, &c., this year.

Will you, therefore, be so kind as to allow me to request any bee-keepers in Harrow, Wembley, Pinner, Wealdstone, Mill Hill, and thereabouts, to send me their names as soon as possible.

The annual general meeting of the Association will be held very shortly, and if any of your readers would like to join the Society at once, in order to participate in the drawing of prizes, I would mention that the annual subscription is 5s., and that this subscription entitles the contributor to two visits from the paid expert of the Association each year.—J. B. LAMB, *Rathgowry, Harrow View, Harrow, April* 7.

WEATHER REPORT.

WESTBOURNE, SUSSEX.
March, 1902.

Rainfall, 1·92 in.	Sunless Days, 6.
Heaviest fall, ·58 in., on 14th.	Below average, 27·8 hours.
Rain fell on 11 days.	Mean Maximum, 51·7°.
Average exactly.	Mean Minimum, 37·3°.
Maximum Temperature, 59°, on 31st.	Mean Temperature, 44·5°.
Minimum Temperature, 28°, on 24th and 26th.	Above average, 4·4°.
Minimum on Grass, 12°, on 26th.	Maximum Barometer, 30·45°, on 17th.
Frosty Nights, 8.	Minimum Barometer, 29·15°, on 24th.
Sunshine, 125·3 hours.	
Brightest Day, 21st, 10 hours.	

L. B. BIRKETT.

Echoes from the Hives.

Brook Hall, Londonderry, April 6.—First let me say mine is a beginner's echo. The weather for the last five days has been favourable for the bees. The previous fortnight not, heavy rain and hail falling frequently. My bees are now gathering pollen in large quantities. To-day I made my spring overhaul. I have two stocks in bar-frame hives and one straw skep as a parent stock. In the two wooden hives there is plenty of capped brood, and in one I saw a queen-cell nearly finished. I also saw newly hatched bees on the combs. I think the bees are strong for the time of year and locality. We mainly depend on wild-flowers and fruit trees for early forage, then lime trees, with heather for a finish up. The willow catkins are just over, but the early spring flowers, buttercups and wood anemones, are a substitute.—E. F. GILLILAND.

Queries and Replies.

[2821.] *Sending Queen-bees by Post.*—As a reader of the B.B.J. I beg to ask:—1. When sending a queen by post, say from Ireland to England, how many attendants should be put

in the cage with her and how much food? 2. When introducing queen, should the attendants be placed in introducing cage with her? I have the "Guide Book" and Cowan's "Honey Bee," and in neither can I find an answer, so I should feel obliged for an answer to the above questions in BEE JOURNAL.—JOHN SMITH, *Springfield, co. Kilkenny, April* 5.

REPLY.—By procuring an up-to-date queen-cage we fail to see how you can go wrong on either of the points named. The space for attendant bees is, of course, restricted by the size of the compartment, as is the amount of food in the same way. We therefore reply:—1. The number of attendant bees is a matter for the bee-keeper's discretion or convenience. To mention six or a dozen bees as the needful number would only tend to "worry" a beginner in filling in the stated number. It only requires that the bee-keeper should use his intelligence, which tells him that a few attendant bees are required to keep the queen warm and feed her as required. You must fill the aperture with properly prepared soft candy. 2. Some bee-keepers remove the attendant bees; others do not trouble to do so; it is a matter of choice. In your case we should leave them, to avoid risk of queen escaping from the cage when freeing it of attendant bees. The "Guide Book" has a whole chapter on introducing queens, with six illustrations and description of various types of queen-cage and methods of introduction. Surely this should help you?

[2822.] *Suspected Queenlessness.*—About a week ago I found one of my stocks apparently queenless, for there was only a little drone brood in the centre of the hive, which I supposed was from the eggs of a fertile worker, so I drove the bees from a skep and ran them into the hive on Friday, but found the queen had not gone from the skep, and I put her into the hive on a piece of comb as soon as found, about half an hour later. To-day (Monday) I looked to see if she had started laying. There were no eggs, but I saw a queen cell. I could not see a queen, but I am not good at spotting queens, so I gave them some brood and eggs from another hive. 1. Will you kindly advise me what to do? I have another skep, or could buy a queen. 2. Do you think there is a queen in the hive now?—"DISAPPOINTED," *Warminster, April* 7.

REPLY.—1. If the queen-cell seen is newly built, it is pretty certain that the queen of the driven bees has come to grief. You had better see if a queen is raised from the eggs and brood last given, for although it is early for any chance of a queen being mated, if one is reared, it will do no harm to wait before buying a queen to take the place of the one lost. 2. If a queen-cell is raised as mentioned above, it is safe to say the hive is now queenless.

[2823.] *Bee Stings and Immunity from Infection.*—Do bee stings protect one from infection? We know that formic acid is one of the most powerful disinfectants known to chemists. It would be interesting to know if any bee-keeper has been attacked with small-pox, for instance. I was recently vaccinated, but, much to my surprise, was not inconvenienced even in the slightest, whereas on both previous occasions—the last, seventeen years ago—I have had a very bad time of it. As I have been asked by a medical man, who is a personal friend of mine, to inquire if bee stings have had a similar effect on other bee-keeping friends, I shall be greatly obliged to hear the experience of others.—"FORMALIN," *Essex, April* 3.

REPLY.—We are very pleased to hear you can even suppose that your bee-stings have had a beneficial effect as stated. It is a well-known fact that good results have followed inoculation by bee-stings in cases of rheumatism, but we should want strong evidence before crediting the formic acid in the sting-poison with securing any immunity from small-pox. Any reliable information, however, from bee-keepers on the point would, of course, be welcome.

NOVELTIES FOR 1902.

A NEW POSTAL AND INTRODUCTION CAGE.

This new queen-cage was one of the novelties shown at the B.B.K.A. *Conversazione* on the 20th ult., and attracted considerable attention. The form of the cage, together with the method of using it, will be made clear by the accompanying cuts (figs. 1 and 2), along with Mr. Edwards's description as given by himself at the meeting referred to. He said:—

"In construction it was simply a small block of wood, 4½ in. by 1¾ in. by ⅞ in., with two transverse and one longitudinal holes bored completely through it. There was more wood left at one end of the cage than at the other, and the longitudinal hole at this end served as the candy-chamber, the end of the hole being closed with a wafer of cork. The corresponding hole at the opposite end was for inserting queen and attendants, and this was then also closed with cork. Bored in the wire-cloth covered side of the cage would be seen a small hole which communicated with the candy-chamber, and this to some extent was the 'essence of the invention.' The cage containing the new queen was placed on the hive, and once there need not be touched for a week; and while the bees of the hive had free access to the candy at once, the smallness of the hole was such that, as soon as the food was eaten away to a certain depth, the body of a single bee sucking at the sweets blocked up the opening; consequently, some time must elapse before the candy was all eaten away, and in the meantime bees and queen were getting familiarised. He believed that by the use of this cage queen-introduction

could be made almost a certainty. The 'observatory' feature—a piece of mica secured to the back of the cage—allowed the progress of matters to be watched without any interference with or disturbance of the hive—the cause, probably, of many failures in queen-introduction.

"Fig. 1 is a general view of the cage, wire-cloth uppermost, and fig. 2 is a part-sectional view serving to make its construction clear, the cage here being shown as it would be used

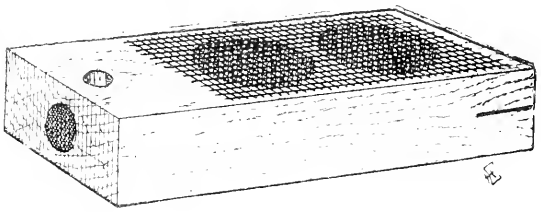


Fig. 1.

on the hive, mica uppermost. The letter references are as follow:—A, circular chamber for queen and bees (ventilated by a saw cut S across the end of the cage) communicating by O with a non-ventilated chamber B; C is that portion of the longitudinal hole serving as the candy compartment, and E is the 'eating-out' hole communicating therewith; PP are the plugs of cork; W

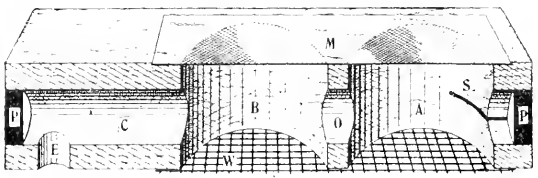


Fig. 2.

is the wire-cloth, and M the mica. When in transit by post, a piece of corrugated paper wrapped longitudinally round the cage covers the cork plugs and minimises any risk of damage."

BEE-KEEPING FOR WOMEN.

HOW TO BEGIN.

If you are going into bee-keeping as a business you should begin at the very beginning, and know something about bees.

When I first commenced driving I did not drive a horse until I knew how to harness and unharness it. I wanted to learn enough about the harness, so that if anything went wrong about it I would know what it was that was wrong, and how to remedy it; and more than once I have been glad I knew something about the harness, as I should have been in a bad plight if I had not.

A beginner of to-day has such an advantage over a beginner of, say, forty years ago. Almost everything then had to be learned by actual experience, and some of the experience was costly. I venture to say that some of the veterans would have paid a good price to have had some of their questions answered forty years ago. Now, all the beginner has to do is to send the question to the *American Bee Journal*, and back comes the answer. And just think of working with bees without a smoker and all the modern conveniences we have to-day! So, beginner, whoever you are, count your many blessings, and do not forget under what bright prospects you are starting your venture, and don't you dare to get discouraged. If you are tempted in that direction, just think back what it would have been forty years ago, and all your discouragements will vanish like smoke.

Who knows what bright prospects the bee-keeper of forty years from now may expect? With bees with long tongues and a non-swarming strain (I certainly hope they will reach that point during my lifetime), bee-keeping forty years from now may be a perfect dream of bliss, even if at present it is not.

There are so many and such good books and bee-keepers that a thorough study of them will give you a pretty good foundation to start on. But there are some things that you must get directly from the bees themselves.

Suppose you start with a very few colonies. That will give you a chance to experiment with the bees, and gain experience. Then, if you do have some loss in learning your lesson, it will not be as heavy as if you had a larger number.

I don't see why a woman is not in every way qualified to keep bees as well as a man, if she has the brains and knows how to use them. To be sure, in the matter of strength man has the advantage, but it is usually more than balanced by a woman's power of endurance, patience, and perseverance.

Let us hope that if you are going to keep bees you are in a good locality. That has so much to do with your success or failure. It seems to me that in bee-keeping more than any other business there are so many elements entering into it over which you have no control. You may have your colonies ever so strong, all ready for the harvest, and yet not get any crop, because there is no nectar in the flowers; or the weather may be too cold; or it may be too wet, or too dry, or there may not be any clover, &c. Well, I always feel better reconciled to a failure of that kind than I would to have an abundant flow of nectar and not have the bees ready for it.

Unless you have some capital to fall back on it is well to make the bees pay their own way. I am not sure but it is a good plan to make them do it any way,

capital or no capital. You may not increase your colonies quite so fast, but you are on pretty safe ground. If you keep a strict account of what your bees cost you, and what they bring in, you are a good deal more likely to make money on them than if you run on the haphazard plan, because you will be more careful of your expenditures, and buy only what you really need.

Another very important item is that you have good stock. It costs just as much to keep a poor colony of bees as a good one. They may be equally strong, and one colony give you 50 lb. of surplus honey, and the other only 15 lb. You will readily see that the 15-lb. colony is not a profitable investment. What will you do about it? The first thing to do is to kill the queen of the poor colony, then give them a queen reared from your best colony. You may not get as good a queen as its mother, but you are not likely to get as poor a one as the one you killed; and by breeding from your best queens and killing your poor ones, in time your stock must be improved; and good queens mean more dollars and cents every time.

What do we mean by good queens? We mean the ones that produce workers that are hardy and are good honey-gatherers. When we have queens that will produce that kind of bees, we call them "good queens." We do not care whether they are yellow, leather-coloured, or black; whether their bees are three-handed or not, only so they get the honey.

To be sure, if we could have their good qualities, and the golden yellow bands combined, we would like it; but we are not going to give up the good workers for the sake of having yellow bees, no matter how pretty they are. It is honey we want. I would pay three times as much for a tested queen that had been tested as to the quality of her bees as honey-gatherers as I would for a tested queen that had been tested merely as to the number of bands her bees had.—EMMA M. WILSON, in *American Bee Journal*.

TRADE CATALOGUES RECEIVED.

GEORGE ROSE, *Liverpool, Preston, and Ormskirk*.—Mr. Rose, who is nothing if not original, again sends us a big catalogue, which is this year in most particulars unlike any one else's in size, shape, and contents. It is, in fact, a combined list of garden seeds, plants, trees, and general nursery stock, with "cultural directions for every month in the year," along with a full line of bee appliances and everything pertaining to or connected with bee culture. The 82 (long quarto foolscap) pages are literally bubbling over with illustrated descriptions of the many things dealt with. Among them bee goods have a prominent place, and we find the best known appliances made at home and abroad handled wholesale and retail in big lots. The great value, however, to bee-keepers of Mr. Rose's list is its usefulness for hanging up in the bee-house as a book of reference regarding the price, size, and style of every possible requirement in the apiary or garden. We therefore cannot do better than advise readers to write for a copy, and let Mr. Rose speak for himself and his methods of doing business, which he does with no uncertain sound, and in the manner of one who "knows whereof he speaks."

JAS LEE & SON, 10, *Silver-street, Bury-street, Bloomsbury, London*.—Messrs. Lee's list has again been thoroughly revised for 1902, several novelties being introduced for the coming season. The firm have also made arrangements for the prompt supply of selected queens, stocks, and swarms of bees, so that every branch of the business is now fully equipped for the coming season. No goods save such as have had a practical trial—in order to test their efficiency—seem to have a place in this catalogue. It is also refreshing to see so many appliances listed which were originally devised by themselves. The senior partner, Mr. James Lee, has probably had a longer and more varied experience as a hive-maker than any one in the trade, besides being himself a practical beeman, so that his work is reliable.

PRESS CUTTING.

HONEY FROM ORANGE BLOSSOMS.

We get many fine quality fruits from Jamaica, foremost amongst which are oranges, bananas, pineapples, and mangoes. Now there is every prospect of a boom in Jamaica honey. Why this dainty should be of such choice quality can hardly be explained at present, though it is clear that bees being very partial to orange blossoms, and there being plenty of these flagrant flowers in the Colony, Jamaica honey ought to be transparent, daintily flavoured, and of the highest quality. The samples of Jamaica honey that have been marketed in this country are of a light amber colour. Some are exceedingly clear and pale, and when the quality of this honey becomes generally known there will be little chance for its Californian competitor in England. Now, imported honey is not free from glucose, as a rule. Glucose is certainly of an injurious nature. There can be no doubt about that. As honey from Jamaica is absolutely free from glucose—they have no glucose factories there—it is admitted by every one in the business that Jamaica honey is absolutely pure, and far more wholesome and delicate than any foreign importation. As a matter of fact, Jamaica honey consists of what are termed "water-white" and "light amber-coloured" qualities, the former making the highest price. That the high quality of the Jamaica honey is recognised in the trade is evident from the

fact that though New York consumes California honey freely, yet, solely on account of superior quality, large quantities of honey are shipped from Jamaica in barrels for the New York trade, and the dealers there testify that this honey is absolutely "straight." We have no doubt that Jamaica honey, labelled as such and put up in an attractive and special style of jar, would command a ready sale in preference to the doctored samples that are sent us by foreign shippers. The above facts have induced us to "boom" Jamaica honey.—*Fruit Trade News.*

Bee Shows to Come.

June 10 to 13, at Reading.—"Bath and West" Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Full particulars shortly.

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. **Entries close April 30.** Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W.

July 26. at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

C. W. KEHRER (Bloemendal, Holland).—*The* B.B.J. *and* "*Politics.*"—We are sorry that the words "a worthy cause," in our footnote to the Obituary Notices on page 127, have given offence to our Dutch friend, who is, we are pleased to learn, "a regular reader" of the B.B.J. It is our rule to carefully exclude "politics" along with other unsuitable matter from our pages, and we did not suppose the simple words in question transgressed this rule; but to insert such expressions as our correspondent uses with regard to this country and its methods in dealing with the enemy with which its soldiers are now fighting would, to put it mildly, rather endanger the security of the building in which the Editors sit. We must, therefore, be pardoned from saying more than that our correspondent thinks our "cause" in South Africa "an utterly unrighteous and accursed one"—if it will relieve his feelings—and be content to leave the rest to the judgment of posterity. Meantime a quiet perusal of Dr. Conan Doyle's little book on "The Transvaal War and its Conduct" (price 6d.) might be useful to our friend.

THOS. HOOD (Pickering).—*Honey Presses.*—We are not overlooking your communication on the above, but it so happens that we are also withholding (or deferring) publication of a letter from Mr. Rymer on the same subject as being perhaps too "personal" in character. We will, therefore, consider both letters, and, if convenient, will probably print them simultaneously in justice to the parties concerned.

A CONSTANT READER (Doncaster).—*A Beginner's Difficulty.*—1. If "the bees appear quite healthy and are very hungry," as stated, it needs but to see them carrying in pollen freely on fine days to make you easy with regard to the queen. Only inspection of the frames will, however, put the matter beyond dispute. 2. You must on no account "give food on a board in front of the hive." Such a practice will assuredly lead to mischief from other bees than your own. Your letter got mislaid, hence delay in reply.

JOHN GRIFFITHS (Ringswood).—*The B.B.K.A. Insurance Scheme.*—The "full particulars" asked for will be published in this journal without delay, when the "scheme" has been decided on by the special committee now dealing with the matter. This should be quite clear to those who have read what appears in our last issue.

A. FULLYLOVE (Tamworth).—*Beginning Bee-keeping.*—You will need a guide book as a preliminary to any operations with bees. Our journal can make no pretence to teach beginners what to do and how to do it, in reply to the query you put. A good text-book (costing 1s. 6d.) is indispensable to all beginners who hope to succeed.

BUZZ (Caerleon) —"*Clipping*" *Queen.*—*Bee-Smokers* —1. Beyond saying that "clipping" queens' wings is a practice that meets with little favour in this country, we cannot see any advantage in discussing the *pros* and *cons.* of the method, as you suggest. 2. Personally, we prefer the smoke from burning rags or brown paper used in the ordinary bee-smoker to the fumes of carbolic or creosote as a bee-subjugator.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F. B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

J. W. W. (Shrewsbury).—Comb sent is in very foul condition from mould and damp. It contains only mouldy pollen, and the filth arising from being left for the free use of vermin such as live on offal of all kinds. There is nothing to use the microscope on.

A. L. (Yorkshire).—Comb sent contains chilled brood only—no disease.

*** *Several Queries (not urgent) are to hand and will be replied to next week.*

Editorial, Notices, &c.

THE EARLY SHOWS OF 1902.

THE "ROYAL" AT CARLISLE AND "ROYAL COUNTIES" AT READING.

In view of the near approach of the date, April 30, for closing entries for the "Royal" show at Carlisle, it may be well to remind readers that the same facilities are offered, as in former years, for the withdrawing of entries for honey of current year, and the return of fees paid, in case of the season being so backward at date of show as to prevent honey of the present year being staged. It must also be borne in mind that the "Royal" show is held this year a fortnight later than usual, which fact is of the utmost importance to intending exhibitors.

We have just received the prize list for "Hives, Honey, &c." for the "Royal Counties" show at Reading on June 10 to 13. The entries for this close on Saturday, May 17, and here also the authorities of the exhibition issue a "special notice," to the effect that in the event of intending exhibitors of comb and extracted honey of the current year being "unable to send their exhibits owing to unfavourable weather for honey-gathering," the entrance fees will be returned if "six clear days' notice of withdrawal is given of their inability to send their exhibits."

WARWICKSHIRE B.K.A.

SIR JAMES SAWYER ON BEE-KEEPING.

The annual meeting of the Warwickshire Bee-keepers' Association was held at the Grand Hotel, Birmingham, on the 10th inst., Sir James Sawyer (who was accompanied by Lady Sawyer) presiding.

The Committee had pleasure in reporting the continued prosperity of the Association, which now has a membership of 400. The income amounted to £117, and the expenditure to £129, leaving an adverse balance on the year's work of £12. Great benefit had been derived from the depôts provided for the sale of members' honey, and the fact that 9,450 labels supplied by the Society were sold showed than an enormous quantity of honey had been disposed of. The Committee were arranging with the Warwickshire Agricultural Society to hold their show this year at Warwick in conjunction with that body. The report was accepted on the proposal of Sir James Sawyer, seconded by Mr. A. H. Foster, who remarked that the increase of membership had enabled the Committee to fulfil an old promise to give exhibitions of honey and appliances at the various local shows. Lord Leigh was re-elected president, Mr. A. H. Foster hon. treasurer, Mr. J. L. Hawkes hon. auditor, Mr. J. N. Bower hon. secretary, Mr. J. R. Ingerthorp assistant secretary, and Mr. George Franklin expert.

On the conclusion of the business part of the proceedings, Sir James Sawyer had something interesting to say on the value of bee-keeping. He had long, he said, taken an interest in the Warwickshire Bee keepers' Association and the excellent work it was doing. He had thought a great deal about the agricultural difficulties which had so long weighed upon the nation. One of the pressing difficulties was that of getting labour. That difficulty also partly arose from the attraction offered by towns, as against the country, as a residence for working people. He, however, saw two attractions for inducing cottagers to stay in the country—the keeping of a pig and the introduction of bee-keeping. "Find the cottager a pig," said Sir James, "and he has a great inducement to stay in his cottage. Let his wife take up bee-culture and the production of honey, and she will find not only an interesting and instructive pursuit, but something which brings grist to the mill." A cottager, he declared, could pay the rent of his house by bee-keeping. It might, therefore, be pressed forward, either from a political or economic standpoint, and, in his judgment, the Association was doing excellent work in improving the lot of the cottager or agricultural labourer. It also undertook the sale of members' honey, and gave a guarantee as to its origin and purity. As interesting to bee-keepers, Sir James incidentally mentioned that the Council of the British Bee-keepers' Association had under consideration a system of insurance, by which bee-keepers might insure against accidents caused by their bees outside their apiaries. The maximum amount of compensation would be £30 for each apiary, providing a certain percentage of members joined in the scheme. The insurance premium had been fixed at the moderate amount of one penny per stock, payable on the maximum number of stocks in the apiary during the year. Sir James afterwards discoursed on the constituent parts of honey, declaring that it was a nutritious food, capable of administering to every activity of the body and mind, of muscular action, and of resistance to disease and cold. It was also valuable as an emollient and demulcent. Indeed, concluded Sir James, we have gone rather too far in letting the use of honey become old-fashioned, and the time has arrived when its virtues should be more recognised.

An interesting meeting closed with the usual votes of thanks.—(*Communicated.*)

LINCOLNSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting was held in the Guildhall, Lincoln, by permission of the Mayor, on March 22. The President of the Association, the Right Hon. Lord Heneage, presided, and

in moving the adoption of the report and balance-sheet, his lordship remarked that he had just returned from Southampton from seeing the 3rd Battalion Lincs. Regiment off to South Africa, which regiment was a credit to the county, the officers, and itself, the embarkation being carried out with perfect discipline and order. Turning to the business of the meeting, his lordship said that the membership was still on the increase, as was also the income of the Association. But there had been an increased expenditure, the balance of £10 being the smallest for several years. The report and balance-sheet were adopted. The President and other officers of the Association and Committee were all re-elected.

The medals competed for at Brigg Show were then presented by the Chairman to their respective owners, viz., B.B.K.A. Silver Medal for display of honey, and Silver Medals (two) of the Lincs. B.K.A. for sections and extracted honey respectively, to Mr. A. W. Weatherhogg, Willoughton, Lincoln; the B.B.K.A. Bronze Medal to D. Seamer, Grimsby.

Mr. W. Herrod, expert of the B.B.K.A., gave a most interesting and instructive address on "The Production of Honey and its Preparation for Exhibition and Sale," which was fully appreciated by all present, Mr. Herrod saying it had never been his pleasure to address a meeting of a County Association at which so many ladies were present.

The meeting closed with the usual drawing for bee-appliances.

There were a considerable number of members and others present from nearly all parts of our large county.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

*** ***In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

SWARM-CATCHERS.

[4747.] I have been labouring for the past three years to find an appliance that fills the requirements of a "swarm-catcher" and does not give the bees the trouble of passing through the excluder when loaded with pollen, and at the same time be relied on as a safe "catcher." I see in the B.B.J. of last week an illustration of the "Edwards" swarm-catcher, and consider it a very good idea, but to my mind a "catcher' that does not cover the entrance to the hive would be of much more value. For myself I have always used the appliance known as the "Brice," but there is one objection to it, viz., the bees will not tolerate captive drones in the hive; they first kill them and then try to draw their dead bodies through the excluder. By so doing they not only waste a lot of time, but block up the excluder, and thus stop the passing in of pollen-loaded workers. I have now found a means of doing away with this trouble, and send on particulars of my plan with sketches. The entrance "cuts back" 6 in., and comes to a point in the centre. The floor-board—as sketched—shows the excluder as placed inside the hive, on the floor, over entrance, is fixed ⅝ in. from the back of entrance, leaving ⅝ in. for the loaded bees to pass through. The floor with two entrances ⅜ in. wide is now level. The body-box has three holes (larger inside than they are out) cut in its front side; this assists the queen in finding her way to the "catcher," and once in she is not so likely to make her way back again. The catcher is fixed over the entrance in a way that allows the bees to pass in and out quite freely without being troubled with the excluder at all. This must be a great saving of time when the honey-flow begins. Fig. 5 shows the catcher, made after the "Brice," except the bottom, which latter is wood instead of excluder, so that when the bees cluster they cling to the catcher instead of hanging on to the entrance. I think myself it will be a fine thing for out-apiaries, as by giving foundation in the "catcher" the swarm can be left for a week or two without any fear. I have tried it myself, and like it well, but wish to have your opinion on it, as you are willing to offer information to those that need it. I trust my description is clear enough for you to make it out. Thanking you for the information I have gained from your B.B.J.—H. EVELEIGH, *Wood Green, N., April 7.*

[While your appliance, as sketched, shows some points of novelty, it is evident that you have drawn pretty largely upon the salient features, of course, of the "Edwards" swarm-catcher, *which being legally protected* cannot be drawn upon at will by any one who chooses. Your ideas are also somewhat crudely worked out, and the requirement of a special floorboard, together with the mutilation to some extent of the hive front, tell, we think, against its utility, even if it should be found on trial to be a success. Perhaps our correspondent Mr. Edwards—who we know has been studying and experimenting with swarm-catching appliances for several years—will write a few lines of criticism in reply to your communication and thus assist in gauging its value. By so doing he would also settle the question of keeping clear of any infringement of his

legal rights, prior to which settlement we need not incur expense in providing line-blocks from sketches sent.—EDS.]

THE "RYMER" HONEY PRESS.

[4748.] I enclose herewith a letter from Mr. Rymer withdrawing certain statements which he has made in a letter published in the BEE JOURNAL of March 6, and shall be much obliged if you will kindly insert same in your next issue.—J. P. W. LIGHTFOOT, *Pickering, Yorks, April* 11.

Levisham, April 1, 1902.

DEAR SIR,—I desire to express to you my regret at having published in the BEE JOURNAL of March 6 (page 94) the statement that the press in question was "said to be required for pressing sections."

I now withdraw such statement and undertake not to repeat it.—Yours truly,

(Signed) J. RYMER.

Mr. J. P. W. Lightfoot,
Pickering.

[Reverting to our reply to Mr. Thos. Hood (Pickering), on page 150 last week, the above correspondence renders it unnecessary for us to insert either of the letters alluded to, and which we purposed publishing later on. We are, therefore, glad that the subject in dispute may now be considered closed.—EDS.]

BEES RAISING QUEENS IN MARCH.

[4749.] Saturday, the 12th, being a lovely day I have just looked through my stocks of bees, and they all answered to "call," being clean and healthy. Several of them, however, are not so forward with brood as I should have liked. Two of the best had each four frames of brood sealed and five others with only three frames. The remaining hives, save one, showing no more than two frames sealed. The hive last named is "a puzzler" to me. I make it a rule to take a good look at the entrance before opening any hive to see how the bees are working in order to form an opinion on their condition before disturbing the frames. In looking at this particular hive I saw two queens lying upon the ground, one quite dead, the other nearly so, only a faint movement being visible. I forward the two dead queens for your inspection. I thought this very strange, because the weather has been bitterly cold for seventeen days past and scarcely a bee to be seen outside, nor had I seen any drones on the wing. I, therefore, concluded that after covering them up in October something had caused the death of the old queen, and the bees had raised several cells from which queens had hatched, but being unable to mate they became drone-breeders and were cast out as worthless. In this way I judged the hive to be of no good, but, to my surprise, I found on examination three frames partly filled with sealed worker-brood and about eighteen sealed drones and a quantity of quite lively drones running over the combs. I examined all the combs carefully, but found neither eggs or unsealed brood, but saw a fine young queen running actively about on one of the combs. There had been six queens raised altogether, but several of the cells were partly cut down, but two still had the caps on. What is your opinion of the remaining queen? Do you think she has mated, and what about the queen from which I have cut one wing? Do you think it was the old queen or are they both young virgins? My opinion is that the queen left mated during the day and on her return killed and the bees cast the other out. It was about 4 p.m. when I started upon this hive. I shall keep a close watch upon this hive and will let you know later on. Have any of our brother or sister bee-keepers had the same experience so early in the year? —A. H. MILLER, *Egham, Surrey, April.*

[One of the two dead queens sent, though too dry and hard for *post-mortem* examination, was evidently the old queen. The other one ("nearly dead" when found outside the hive) is a young queen to all appearance recently hatched. It seems, therefore, clear that the old queen was either deposed by the bees themselves or died from age or accident. With regard to the "fine young queen" now in the hive having been mated in March, we doubt this very much, but time will soon clear up the uncertainty.—EDS.]

BEE STINGS AND INFECTION.

[4750.] In reply to your correspondent "Formalin" (2823, page 147), Do bee stings protect one from infection? I should say this opens up a most interesting subject, and I should be pleased to see replies from bee-keepers generally. I can sincerely say that since I have been "inoculated" by bee stings I have neither been attacked with influenza nor suffered from any contagious disease, though influenza has twice been through the house, excepting my boy, five years old, and he has been stung many times almost ever since he could first toddle. He has also been entirely free from all children's complaints. I have not been revaccinated myself, but my little boy was when over four years old, and the four inoculated places "took" well, with not much inflammation, and he suffered but little from the result. I have asked several neighbouring bee-keepers their opinion on the subject, and they join unitedly in saying they have never had any infectious disease, or been in any way inconvenienced when revaccinated. Until suggested by "Formalin" I did not attribute this exemption to inoculation by bee stings, though previously I suffered a good deal from rheumatism. I forward name and address, while signing myself "GADE," *Herts, April* 15.

NOVELTIES FOR 1902.

CORRUGATED-CARDBOARD PACKAGES FOR HONEY.

The "novelties," of which we give illustrations below, were shown at the late *conversazione* of the B.B.K.A. and attracted a good deal of favourable attention to the several items shown. They are manufactured by the Safety-paper and Box Manufacturing Company, and may be had from dealers in bee-appliances at very cheap rates.

With regard to the various boxes and cases depicted, we gather from the makers that being made in corrugated cardboard they are recommended for efficiency and strength, while the cost is small. Fig. 1 is described as a strong

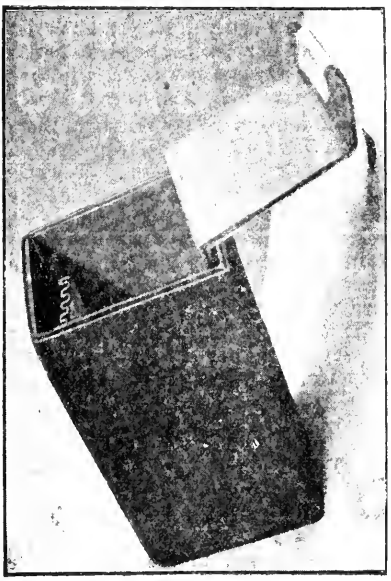


Fig. 1.—Box for 1-lb. Jar.

and safe postal box for a single 1-lb. jar of extracted honey, similar boxes being made to hold two, four, six, and twelve jars at a slight increase in cost.

Fig. 2 shows a light, cheap, and convenient case for sections sold over the counter. It has, as shown, a tape handle for carrying by, and a small "window" in one side, either of mica or transparent celluloid, through which the comb may be seen. But its chief recommendations are (1st) cheapness, (2nd) the convenience of being sent out in the flat, as shown on the left of the cut. It therefore travels cheaply in bulk and takes up little room when stored away in that form.

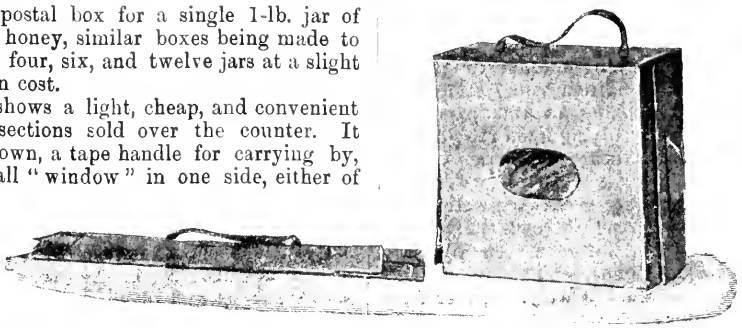


Fig. 2.—Section Case in the Flat, and Folded for Use.

Fig. 3 is intended for a single 1-lb. section of honey. This is also made in larger sizes,

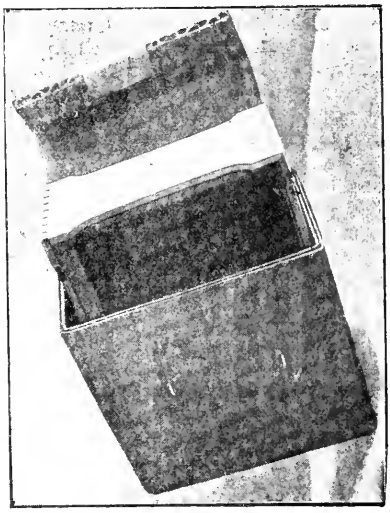


Fig. 3.—Box for 1-lb. Section.

as fig. 1. No fear need be entertained with regard to the strength of these boxes, for we have personally tested the point by standing on one, and a weight of twelve stone made no impression whatever.

The main trouble in sending sections by post is caused by bee-keepers forwarding those obviously unsuitable for transit; and to obviate this trouble a small printed label is fixed in every box which reads thus: "Only those sections with combs attached to the wood on all four sides are safe for conveyance by parcels post." Any one ignoring this precaution will therefore have themselves to blame if a breakage occurs.

The other item shown (fig. 4) is a cardboard cover for hive-roofs. This is stated to need

only a coat of paint or tar to make it perfectly watertight and effective. It is made to suit

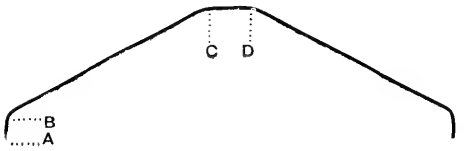


Fig. 4.—Cardboard Cover for Hive-Roof.

any size of roof, the points B, C, and D being made pliable by pressure without danger of cracking the cardboard.

MARKETING COMB HONEY.

Your editorial scoring honey-producers for their sluggish (and in part it may be called corrupt) practice is timely, and ought to have a wide circulation, because it is of great importance to honest producers and in stimulating the markets. I am not a large producer, nor one who has had large experience in bee-keeping, dating back for only three years. When I began three years ago I had to "Peddle" out my honey in order to realise 15 cents per lb. for nice white comb; 10 to 12½ cents was the market price, so considered, for all classes of honey. The second year nearly all my honey was sold at my own house at an average of 17½ cents per lb., which very much encouraged me, and was a source of pleasure.

On May 8, 1901, my number of colonies had increased from seven in 1899 to sixty, with full supers of nice white honey. I was compelled to try again the markets. "Peddling" was out of the question. I crated my honey under the rules laid down in *Gleanings*, in three grades; loaded my waggon, and called on our best groceries, offering to leave a crate with them. Most of them already had honey from commission houses, and did not want any at 15 cents when they could buy it at 11, to which I replied that I simply asked their permission to deposit a crate of my honey by the side of what they had; and if they could not sell it in a reasonable time and pay me 15 cents for it I would take the honey back, and pay them storage if desired. My address with guarantee was written on the crate with that understanding. All my honey was soon deposited in this way. I went about my work, and, bless you! two days afterwards a grocery waggon came in front of my yard with an order for 200 lb. of just such honey as I had left with them, with an invitation to come and get my pay, and 16 cents was agreed upon for fancy white and No. 1 of any kind of my grading. Four houses got all my honey this season, and I had to make but one trip to the city to sell my whole crop.

But here comes what I wanted to tell: Other producers came and asked me to sell their honey, saying they could get but from 10 to 12½ for theirs, and wanted to turn it over to me at that price, to which I finally consented. But I soon learned that it would not do at all to attach one's name to another man's product, for I had to take back a large part of the honey I had undertaken to sell for friends.

One consignment from an old friend was, I am sorry to say, an outrageous conglomeration, clearly exhibiting an intention to deceive, regardless of honour or repute.

Our market at present is flooded. Agents with consignments arrived, and are drumming it out in all parts of the city at from 10 to 12½ cents; but my customers will not handle it at any price. One of my customers, who has been in the grocery business all his life, told me a few days ago that he had not the least idea that so much honey could be consumed provided a fine article put up in nice condition was offered. His experience showed him that such will bring fancy prices and largely increase the consumption. He said, "Your honey sells at the rate of one crate per day, while with commission-house honey three to four crates last a whole season; and I must say that, if you bee-keepers were more honest, your markets would vastly improve, and the consumption of honey would displace the so-called fancy syrups which are a manufactured poison at the best."

Now, Mr. Editor, being only a small producer, my argument—provoked by your recent editorial—cannot be of much weight in correcting existing evils. But it does seem to me that, if a little more honesty was practised, together with more intelligence, all would be vastly benefited in the end by producing a larger consumption and a more uniform price. Every poor or bad section of comb-honey put on the market acts as a drawback instead of a stimulant. The actor in the drama may be profited at the time, but when he again has honey to sell he has to seek another buyer; but what does he do toward increasing the consumption of honey, and improving the market? What they have done is this: they have disgusted the consumer by placing an inedible chunk of honey before him; discouraged the merchant, flooded him with complaints from his customers, and actually caused him to lose trade by the sale of unusable honey treacherously concealed in crates, and unsuspectedly foisted on them.

Now, Mr. Editor, I have no interest in this matter; my own produce will always find a good market; but the wilful inclination to deceive others in this manner is rampant, and is damaging to the interests of men of honour and integrity; besides, it largely tends to demoralise the markets, which affects all producers; and I for one would advise those who practise that habit to quit the business and do something for which they are better fitted.

Another matter that interests me is that of statistics. I see the thing is now in evidence and ought to have been so long ago; but I

would say that the National Bee-keepers' Association should, in my opinion, be the one authority to undertake the question of honey statistics for this country, if bee-keepers are to derive any benefit from it. It will not be difficult for our journals to locate the producers and send them proper blanks to be filled out and returned at a given date to the secretary to be compiled and published under the authority of the organisation. You will find it more reliable than anything else you can get. My reason for making this statement is that I have been a statistical correspondent for more than twenty years, and have enjoyed the honour and the profits of the position, which would average about 10 cents a year in seeds. I do not wish to cast any reflection upon the head of the division; on the contrary, Mr. John Hyde is doing wonders with the means at his command. Suppose the department would add a honey column to its blanks now sent out, not one in 500 sent out would be filled out practically, intelligently, and with reliability. A statistical correspondent should be a practical as well as experienced man, and not seldom will have to lose time to procure correct information on certain subjects. I made many trips, and lost time and horse hire thrown in, for the benefit of the good and generous public; but I do not believe there are many who will lose time to procure correct information to give to the good public, just for the honour of the thing. On the other hand, if the National Bee-keepers' Association sends out blanks to practical bee-keepers, nine out of every ten will make a correct report; will take pleasure in returning the best information obtainable, because they will all be interested in the reports, and it will not all or nearly all be guesswork and exaggeration.—M. BROWN in *Gleanings* (American).

[Those who make a business of buying and selling know only too well that the great mass of bee-keepers do not understand the importance of putting up a first-class article. The great bulk of the comb-honey that goes on to the market is unscraped, a great deal of it is travel-stained, and much of it is poorly filled out, and, as a consequence, it goes begging; but a really first-class, gilt-edge comb-honey will sell on sight at good prices.

Yes, we do need reliable statistics, and I hope things may shape themselves in such a manner that the National Association can take hold of it.—EDITOR *Gleanings*.]

Queries and Replies.

[2824.] *Points in the "W.B.C." Hive.*—Will you please give me a little information with regard to the "W. B. C." hive?—1. Do you generally use the shallow-frame box with your hives during summer placed under the brood-nest? And is it left there untouched until the honey-flow is over and then taken away? 2. Does the queen enter the shallow-frame chamber and breed there? As it gives the bees a good deal of extra room, it ought to help in preventing swarming. 3. May I suppose that the shallow-frame chamber can be put on when the honey-flow begins and the hive is ready for supering? For myself, however, I work entirely for sections. 4. When hives are placed in a line, with entrances, say, 5 ft. or so apart, do you think it needful to put a distinct mark on the hives? And if so, would it suffice to paint the roofs of the porches a distinct colour, or would it be better to paint the whole roof of hive? 5. I enclose a sample of syrup left over from last season. Please say if it is perfectly good for present use?—H. J., *Mountmellick, Ireland.*

REPLY.—1. The hive in question, as originally designed and used by the writer, was not provided with any convenience for working a box of shallow-frames below the brood-chamber, as stated; nor should we suppose that any user of this particular hive follows the plan you suggest. Our own method of working the hive is to have all surplus-honey stored *above* the brood-nest in the orthodox way. On the other hand, we admit the usefulness to some, who, from lack of experience or of aptitude for the work, find difficulty in getting bees to take possession of sections or surplus chambers, in being enabled to overcome their trouble by means of a movable box made to slide in below the brood-nest. The same arrangement will also, no doubt, be helpful in preventing swarming; but the older plan of giving timely room in advance, with shade and ventilation, quite meets the case in our hands. 2. The box of shallow-frames (or the section-rack, as the case may be) is only left below till the bees have started comb-building therein, when the box—bees and all—is removed to its proper position *above* the brood-chamber. The queen is, therefore, never allowed to begin ovipositing in the shallow-combs at all. 3. Yes. 4. We have found a space of 6 ft. between each hive is sufficient for the purpose intended, without troubling to paint the hives in different colours. 5. The syrup is too thin, and would be all the better for boiling up again to rid it of superfluous water.

[2825.] *Transferring Bees. Inducing Early Swarming.*—Would you kindly reply to the following questions:—1. What would be the best *time* and *way* to transfer bees from skep to frame-hive? 2. To induce bees in frame-hive to swarm early, when ought stimulative feeding to be given, and would it hasten the swarming to keep the brood-nest contracted? 3. Tomtits have been seen eating the bees. Is there any way to prevent them except by shooting? I much enjoy reading your journal, and prefer it to any other paper of the kind. At present I am re-reading

some old numbers with pleasure and profit.—"SHAMROCK," *Milford, Co. Donegal.*

REPLY.—Seeing how much better it is to have a new frame-hive furnished at the start with straight. newly-built combs than with patched-up old ones, we never advise transferring combs from skeps at all. The best month in which to take preliminary steps for transferring is April; and the safest method of ensuring success is to allow the bees to transfer themselves. They will do this if, when the skep is getting full of bees, you lift it bodily on to the top-bars of the frame-hive. Pack it nice and snug all round to prevent the escape of warmth from the brood-chamber below (when the bees have taken possession and it *has* become the brood-chamber), then leave the bees to transfer themselves below to frames fitted with foundation beforehand already prepared for the brood-nest. When the queen needs room for egg-laying the bees will draw out the foundation, and the newly built combs will be filled with eggs, while the skep overhead will have its combs stored with honey for removal later on. 2. April is the usual time to stimulate for early swarming, but the hive should have its full complement of combs. 3. Trapping and shooting are the only remedies we know of.

[2826.] *Transferring Bees from Defective Hive.*—I obtained a swarm of bees in May last year, and hived them in a bar-framed hive. On making an inspection a short time since I was surprised to find that the wooden roof of hive was not water-tight. The winter packing overhead and floorboard below were alike saturated with water, while two or three of the combs were mouldy. The weather on the 31st ult. being fine and warm, I therefore transferred the bees and frames to a new hive, which I had in readiness for a this year's swarm. I wish to ask:—1. Have I erred in transferring the bees at this time of year, and is injury to bees likely to result? 2. Will the bees cleanse the mouldy combs, or should I replace them with foundation? 3. Is there any possibility of the queen being lost in transferring to the new hive?—DAVID FRANCIS, *High Wycombe.*

REPLY.—1. No. Nor will any injury have occurred unless the operation has been very badly performed, which is, we think not likely. 2. The bees will do all that is needed in cleaning them up, seeing that the combs are only one year old. 3. Nearly all things are possible, but you should not be needlessly alarmed. If work goes on as usual all will be right, and if not, an inspection of the combs for eggs and brood will settle the point.

[2827.] *Skeps versus Frame-hives for Bees.*—I am thinking of starting an outapiary in the Vale of Taunton Deane, where there are extensive and rich pasture-fields along with the cultivated flowers of the aristocracy, some of the most fertile land in England I am told. I therefore ask, do you think it will be a good place for bees? I am quite a young beginner (aged twenty-two), but have noticed that sturdy "Hodge," with his strong, large skep and thick reed "cap" for supers does well with his bees, while the village clergyman with modern frame-hives appears to get no return for his outlay.—EVALINE, *Chard, Somerset.*

REPLY.—We fear your information is faulty so far as regards the comparison between the skep system and modern bee-keeping with the use of frame-hives. When both methods are worked with equal intelligence, the usual result is two or three times the weight of surplus is got from a frame-hive than can be secured from a skep.

[2828.] *Bees Dying in April from Famine.*—As a beginner in May, 1901, I commenced with one frame-hive. I allowed the bees to swarm, and took about seventy sections of clover and sainfoin honey. I had a few stings, of course, but now, on April 14, the two stocks are on ten frames each, and strong in bees. About five weeks back I bought two more stocks, one (a "cast") on six frames, the other a hive which I find is unfortunately not of standard size. On examining the "cast" to-day I find the bees dead. I therefore ask: 1. Would you advise me to let the other lot swarm and keep them as a parent stock (they are healthy), and so stock my spare hive; or, 2, could I put a skep of bees on top of frames, and so stock it early next month? It is a clear case of being "famished" out with the cast, as the dead bees were crowded on brood which is clean and healthy. 3. Was it too early to remove them into new quarters?—C. R. HOPKINS, *Sulperton, Cheltenham, April* 12.

REPLY.—1. Yes. Let the odd-sized hive swarm, then remove all queen-cells save one—selected as the most forward and promising—twenty-one days after swarming. Shake the bees from the combs and let them run into a hive (made for "Standard" frames), with about five of the frames fitted with full sheets of foundation beforehand. The parent hive will be broodless, and may be dealt with as desired. 2. You can adopt the alternative if preferred. 3. The removal would have nothing to do with death of the bees; it was one of the frequent cases of starvation so regrettable when a young queen is a victim.

Echoes from the Hives.

Ussie Valley, Conon Bridge, Ross-shire, April 7.—Bees in this district are rather backward. The winter was severe and spring very wintry-like, though now a change for the better has set in. Our best colony is covering eight frames, with brood in seven of them. None of the other stocks have more than four frames of brood, some less. I do not know

how it is that this one stock is so far ahead of all the rest, as, though they did very well at the heather last August, they were no more populous than several of the other stocks when closed down for winter. I think the queen must be an extra prolific one, or else that her bees possess the desirable trait of longevity. I will use her for queen-rearing.—J. M. ELLIS.

The Gardens, Wentworth Castle, Barnsley, April 4.—I caught a swarm of bees in the grounds here last June, and have managed to keep them alive through the winter in an old straw skep. I have been interested in the BEE JOURNAL during the last six months, and hope to be able to keep the bees alive from what I read, which is all the help available, as I am not aware of anybody near here who is a bee-keeper.—GEO. BATLEY.

JAMAICA HONEY.

At a time when every effort is being made to improve the position of the West Indies by reviving the ancient sugar industry, it is appropriate to call attention to a scheme which is on foot to place the production of Jamaica honey on a more successful and remunerative footing. Mr. Dickson, of the Jamaica Bee-keepers' Association, has recently arrived at Bristol, and has brought with him samples of honey to place before buyers in the United Kingdom, the idea being to deal as directly as possible with consumers, and so save intermediate profits, which at present fall to the broker, merchant, and wholesaler. Hitherto the market price has been governed by the law of supply and demand at public auction, and, so far as the public are concerned, Jamaica honey is practically an unknown article, as it is not suited for table purposes. It is all consumed in manufacturing processes, and it is difficult to understand, therefore, what Mr. Dickson is to do in order to get better values for Jamaica honey. It has been one of the cheapest articles sold in Mincing Lane during the past twelve months. At each successive auction since April, 1901 (when the new crop arrived), large quantities have been offered, and, although there has been a good demand throughout, prices have been the lowest on record, owing to over-production. Last year the shipments of honey to the United Kingdom were estimated roughly at 13,000 cwt., and we understand this quantity will be greatly exceeded during the coming season, as already some 5,000 packages of 25 gals. each are booked, so that the prospect of better prices for the farmer is not bright. Apiculture is one of the oldest industries in Jamaica, but, owing to various reasons, no great measure of success has attended the efforts of those interested in the business. The greatest drawback appears to have been uncertainty in the quality of the honey and the method of packing, but the Jamaica Bee-keepers' Association now claims to have effectually overcome these difficulties. The Association was formed for the mutual protection of buyer and seller, and the object is the guaranteeing of every package of honey shipped by it to be absolutely pure and of standard quality. A board of examiners has been appointed, composed of practical apiarists, and every package of honey sent by members of the Association for shipment is to be graded by these experts on its merits, and if found to come up to the required standard it is to be branded with the Association's stamp. The Association includes practically all the bee-keepers of Jamaica, numbering over 400, and these represent something like 5,000 colonies of bees. The bee-keepers have hitherto been working at a disadvantage, having been compelled in many cases to mortgage their honey before production, and thus to accept prices below what they might obtain if they were better off. The Imperial Department of Agriculture in the West Indies has recently taken an active part in bringing bee-keeping under the notice of the people of the Lesser Antilles. They have engaged an expert, Mr. W. K. Morrison, formerly connected with the United States Department of Agriculture, who has visited Barbados, Dominica, Montserrat, Antigua, Grenada, St. Vincent, and St. Lucia. During his visits he has advised and assisted the bee-keepers to obtain honey of high quality. His opinion is that the outlook for bee-keeping in the West Indies is very encouraging, as there is an abundance of honey-bearing flowers all the year round. Mr. Morrison's work appears to have aroused much interest, and every effort is now to be made to encourage the industry by establishing model apiaries, granting assistance in obtaining hives, bees, &c., at cost price, and obtaining practical information. Of course, the result will largely depend on the care and attention which bee-keepers are prepared to give the subject. It need hardly be said that Jamaica honey is as highly esteemed as any of the imported honeys on this market, and it is undoubtedly true that the prices obtained for it have been largely governed by the need of the bee-keepers to realise as quickly as possible. If Mr. Dickson wishes to secure the intermediate profits which accrue in the present method of placing the honey as quickly as possible in the hands of consumers—*i.e.*, wholesalers and manufacturers—he must be prepared to sacrifice the superlative advantage of prompt cash, for he can only get that by the Mincing-lane methods of business or by giving buyers such inducements in quality and price as will compensate them for the existing familiar methods of doing business. It appears to us that West Indian bee-keepers would do better if they would not disturb their existing connection at all, but keep up the supplies as hitherto, and also place on the market through wholesalers and retailers exclusively the best selected honey as table-honey in the comb or in glass jars. There may be more money in

that, and if experience were to prove it, the new departure could be pushed without jeopardising the existing trade.—*The Chemist and Druggist*, April 5, 1902.

THE GREAT TIT.

(*Parus major.*)

Referring to the question of "Tits and Bees," a correspondent sends us the following as possessing interest for bee-keepers.—[EDS.]

As for his strength, for so small a bird I do not know his equal; indeed, it is wonderful the power concentrated in his little body. Confine him in a cage, he will force his way through the wires or eat his way out somehow. His beak is a hammer and chisel combined, and he can chip very hard wood with it. His worst fault is that he is very fond of bees, and where these are kept in straw hives he does much damage by pecking and tearing away the entrances to get at the inmates; he can likewise chip the wooden slides used as doors to frame-hives, but it is to the bees themselves he does the most damage, for he will not interfere with the hives except in the winter months. At other times of the year he can get plenty of other insect food; in the winter, however, when food is scarce, he pays daily visits to the bee-hives, picking up the dead bees thrown out; but should there be none thrown out, he pecks at the entrances, and when a poor, half-torpid bee comes to see what is the matter, he snaps it up, flies to the nearest tree, extracts the sting carefully, and puts it on the branch, then eats the bee, or part of it, and goes for another, and a score or more of these tits will be frequenting an apiary all the winter, and living almost exclusively on the bees, and the owner probably never knows it, so sly is this bird when at this work. Now, this habit of the great tit was known to the old bee-keepers centuries ago, yet it is not even mentioned in our standard works on ornithology, excepting Harting's "Handbook of British Birds" (second edition). As a bee-keeper who has often wintered fifty hives of bees, I can speak from an experience of many years, and what is very remarkable is that bee-keepers often make the mistake, and say it is the blue tit which pecks at the hives, yet in all my experience I have never known a single instance of the latter bird doing so.—F. BOYES (Beverley), *Field*, March 22, 1902.

APICULTURE IN THE UNITED STATES.

RECOGNITION BY THE U.S.A. GOVERNMENT.

Our readers will be pleased to know that the United States Government has given apiculture an actual recognition by creating a special commission, that of Apicultural Investigator in the Department of Agriculture. The man who has been advanced to this position is Professor Frank Benton, who formerly was Assistant Entomologist in the Division of Entomology. This position he held from 1896 to August 1, 1901, when the new commission was created.

Professor Benton has been doing some good work in the vigorous way in which he replies to these comb-honey canards that have been published in various papers. I have taken pains to ask the editors of all papers giving circulation to these lies to write to the Department of Agriculture, adding that there was a man in the employ of the Department who made apiculture his specialty, and who could give full information, and it is evident the suggestion in some cases has been heeded.

No one can really estimate the good this new commission has done us already.—*Gleanings* (American).

PRESS CUTTING.

SHROPSHIRE B.K.A.

The members of the Shropshire Bee-keepers' Association have decided to set up an apiary close to Shrewsbury. Mr. Scott, of Broseley, and Mr. W. H. Brown, of Shrewsbury, have each promised to give a stock and hive of bees, and it has been left to Mr. Brown to choose a site. By the establishment of an apiary the Association will be able to hold expert examinations at a convenient centre, for which any bee-keeper in the county may enter.—*Shrewsbury Chronicle.*

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close May 17.**

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close April 30.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** *New Edition of the British Bee-keepers' Guide Book.*—Readers who have ordered copies of the "Guide Book" will please note that the sixteenth edition is completely sold out; hence delay in filling the numerous orders received. The new edition will be ready in a few days, and copies sent without delay to all from whom orders have been received.

W. J. GIBBS (York).—*Uniting Bees in Greenhouse.*—Your former letter has failed to

reach us, but with regard to "joining-up" bees in a greenhouse, it can be done there in the evening, when darkness removes all chance of bees flying. The joined-up lots would then require to be placed on their own stand outside, so that they would not get lost on taking wing the following morning. It goes without saying that united lots should be from contiguous stands. If bees were united in a greenhouse in daylight, all that took wing would at once fly to the glass, and be difficult to "gather up" again.

C. R. (Kent).—*Bee-Syrup for Spring Use.*—The syrup made some months ago will be all right for present use if boiled again for a moment or so.

A. E. FORD (Hemel Hempstead).—*Profits of Bee-keeping.*—We are obliged for "Press cutting" sent, which is creditable to your skill as a bee-keeper, though not quite suitable for reproducing in our pages. We will, however, be glad to have a photo of your apiary for our "Homes of the Honey Bee," when the details now sent would be useful as "notes" on your bee-keeping, to accompany the picture in print.

E. BUTLER (Sutton Coldfield).—*Joining Bee Associations.*—The annual meeting of the Warwickshire B.K.A. appears in this issue. Mr. J. Noble Bower, Knowle, is Hon. Sec. of the Association.

J. RHODES (Greenhithe).—*Transferring Bees.*—1. In allowing bees to transfer themselves the entrance to skep is entirely stopped when placing it above top-bars, so that the bees are compelled to pass through the frame-hive in going and coming. 2. We are not quite clear with regard to your wishing to "work the three stocks (intended for transferring) for sections." This can only be done if the skeps are removed when the bees have worked into the lower hive and established it as the brood-chamber. But steps must be taken to save any brood found in the skeps before removing the latter, otherwise many thousands of bees would be sacrificed. One of the three stocks, however, might be reserved for hatching out all the brood found in the other two, while the latter were worked for sections. This would, in a measure, overcome the difficulty.

J. LING (Linton, Cambs.).—*Re-queening to Supersede Laying Workers.*—If you can safely introduce a fertile queen, it will soon stop the trouble with laying workers.

LEAMINGTONIAN (Leamington Spa).—*Section-glazing Machine.*—1. Not having been able to visit the Dairy Show last year, we cannot say whether or not Mr. Woodley exhibited the section-glazing machine he referred to in B.B.J. of November 2, 1899 (page 432), as quoted by yourself. If he did so, it would not be in competition, as Mr. Woodley's name does not appear in the catalogue as an exhibitor in the class for such exhibits. 2. *Views of Apiaries.* While always glad to receive good photos of the apiaries of our readers for inclusion in "Homes of the Honey Bee," it is understood that all tone blocks from such photos are regarded as "copyright," and we do not give or sell electros of the blocks for use either as honey labels or in any other way.

R. C. OSBORNE (High Barnet).—1. *Wax-moth Larvæ in Quilts.*—If, as stated, the bees in your hive are "very strong, and now cover well nine frames, with brood in seven of them," there need be no alarm at the "two or three grubs of wax-moth found on the ground outside the hive." The very fact of the grubs of the moth being so found shows that the bees are well able to deal with the intruders; and as none were seen in the combs examined it is safe to say the two grubs found in quilts will be all that are left. 2. *Uncapping Store-combs for Stimulating in Spring.*—The method followed of uncapping a little of the sealed combs periodically is very useful at times for the purpose stated. 3. *Insurance for Bee-keepers.*—There is no B.K.A. for the county of Herts; but letters on the insurance scheme may be addressed to Mr. E. H. Young, Secretary, B.B.K.A., 12, Hanover-square, London.

A. BRAYSHAW (Keith, N.B.).—*Doolittle on Queen-rearing.*—The book may be had direct from the author for 1 dol. and postage. Address—G. M. Doolittle, Borodino, Onodago Co., N.Y.

W. NIVEN (St. Andrews).—*Buying Bee-Appliances.*—We will be glad if you will refer us to page of our JOURNAL in which the firm named in your letter advertised bee-goods for sale. Meantime there may, of course, be some valid reason for non-delivery; otherwise, to hold the sum of 35s. for many weeks for goods urgently needed is neither just nor excusable. We will return receipt sent if desired.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F. B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

F. J. (Mountmellick).—There is nothing whatever wrong with comb sent. A few cells contain wholesome pollen, the rest being entirely free from any trace of brood, foul or otherwise.

J. M. K. (Congleton).—Nothing worse than mouldy pollen in comb. No sign of disease.

Honey Samples.

D. W. B. A. (Reading).—Your samples are both good and will do very well for the show-bench as granulated honey.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 12, Hanover-square, W., on Thursday, April 17, Mr. E. D. Till being voted to the chair. There were also present Messrs. W. Broughton Carr, T. S. Elliot, W. F. Reid, E. Walker, T. I. Weston, and the Secretary. Letters apologising for inability to attend were read from Miss Gayton, Hon. and Rev. Henry Bligh, Rev. W. E. Burkitt, Colonel Walker, Messrs. W. H. Harris, O. Puck, and W. J. Sheppard.

The minutes of the previous meeting were read and confirmed.

Three new members were elected, viz.: Mr. Stroud, The Gables, Eastbourne; Mr. E. J. Keeble, Great Oakley Hall, Harwich; A. Hamer, Llandilo Bridge Station, Llandilo.

The report of the Finance Committee was presented by Mr. Weston and gave full details of receipts and expenditure to date. The report was approved.

It was resolved to hold the First Class Examination in London on Thursday, May 15, and the Examination for Second Class Certificates in November, as usual. In accordance with the recommendation of Examiners it was decided to hold the latter in two Sections, with an interval of one to two hours between Sections "A" and "B."

On the motion of Mr. Reid, seconded by Mr. Carr, Council meetings were fixed for the third Thursday in each month (August excepted) commencing at 4.30 p.m.

Mr. Weston gave an account of the work of the Insurance Committee during the past month, together with particulars of an interview with the principal of the firm undertaking the risks in connection with the scheme. The Committee's draft proposals were considered, and after slight revision approved by the Council, the Secretary being authorised to have the amended rules and regulations put into type preparatory to publication in the BRITISH BEE JOURNAL for the information of those desiring to join in the bee-keepers' insurance scheme.

The Council proceeded to the discussion of arrangements for a re-issue of "Modern Bee-keeping," and had before them several tenders for the printing. Suggestions were made with the object of improving and bringing the book up to date.

Several members of the Council, having other engagements, were compelled to leave at an early hour, and, consequently, a number of matters requiring attention had to be adjourned for consideration at the next meeting, which will be held on Thursday, May 15.

NORTHAMPTONSHIRE B.K.A.

ANNUAL MEETING.

The nineteenth annual meeting of the Northants Bee-keepers' Association was held on April 12 in All Saints' Schoolroom, Northampton. Mr. W. Manning presided, and among those present were Messrs. Old, Pilgrim, Buckland, Bubb, &c. The report read by the Secretary stated the past season had been, on the whole, a favourable one for bee-keepers; a good average quantity of honey had been harvested, of very fine quality. The County Council were thanked for the grant, which enabled demonstrations to be given at various shows during the summer. The report was adopted, and the accounts, showing a balance of £7 in favour of the Association, were duly passed. Votes of thanks were accorded to the retiring officials for their services during the year.

The election of officers for the ensuing year then took place. Mr. R. B. Loder (Cottesbrooke) was unanimously chosen President, and the old officials were re-elected as follows:—Vice-presidents, Earl Spencer, K.G., Mr. E. P. Monckton, the Hon. C. R. Spencer, M.P., Lady Knightley, the Hon. E. S. Douglas Pennant, Mr. H. Labouchere, M.P., and Mr. J. Jeffery; hon. treasurer, Mr. G. E. Atkins; hon. secretary, Mr. R. Hefford; hon. district secretaries and committee, Messrs. J. R. Truss, W. Manning, C. Cox, J. Francis, J. Perry, H. Collins, O. Orland, G. Page, W. Winterton, and F. J. Old. It was decided to hold the annual show at Kingsthorpe on August 7. The meeting concluded with the usual votes of thanks.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4751.] The chief topics for bee-keepers are generally the weather and the well-being of the bees. Considering, then, how intimately these two points are dependant on each other, their importance can hardly be over-estimated. The growth of our colonies may be made or marred by a warm or a cold spell—as the case may be—lasting for a week or two just at the critical time, and the success or failure of our season's work largely depends on the continued growth of the brood-nest during the next month or so. This is well known to all old

hands in the craft, but the wish to help our less experienced brethren must be my excuse for opening my "notes" with a reference to the climatic conditions. Every observant bee-keeper knows how great is the loss of bee-life in cold, windy weather; the numbers of pollen-laden bees, which come to grief in their battle with the tempest in the home journey, must greatly reduce the working population and retard the growth of brood nests for lack of nurse bees to feed and cover the tender larvæ, while lessening the number of food-gatherers from the daily enlarging breadth of bee-forage every sunny hour is producing.

These matters are in a measure beyond the control of man, though by careful management he may greatly preserve bee-life by supplying water near the hive. A small cask, set on a box, with a leaking tap—allowing the drops of water to fall on a piece of sacking on a slanting board—or a shallow vessel containing water in which some sliced cork or stones are put for bees to stand on (tealeaves will do), in fact, anything to give a safe foothold while procuring water is most useful in this way.

Bee Stings and Infection.—The suggestion of your correspondent "Formalin" (on page 47) may have some foundation as regards rheumatism and bee stings. I have stated more than once my belief that the poison of the bee sting has a curative effect in this direction. I, too, have escaped "influenza," although it has been prevalent in our district several times—especially amongst our club members. Yet I have not connected "bee stings" as the exemptive cause; for this reason: generally speaking, these "influenza" visits occur when bee stings are few and far between—*i.e.*, during the winter months—so I would caution our craft against rushing to the conclusion that injections of formic acid (with probably other more active poisonous substances contained in the bee sting) is a protection against such insidious foes as influenza and other contagious diseases.

"*Novelties for* 1902."—I see these include a post-box for sections (shown on page 154). Perhaps our friends who have safely consigned sections in these boxes will give others the benefit of their experience. The secretaries of shows may also be able (if willing) to give their larger experience on the subject.

Marketing Honey.—I am glad to see our Editor has given Mr. M. Brown's article from *Gleanings*. Older B.B.J. readers will remember my repeated urgings on our honey-producers the importance of grading their comb-honey, instead of facing their consignments with the best while the bulk is of an inferior quality. I have seen unglazed sections in grocers' and dairy-shop windows—fly-specked and dirty in summer, damp and "weeping" from every cell in winter, unadorned except by fringes of unscraped propolis, the purveyors longing for customers to clear the messy stuff out of their way, and vowing never to stock it again. This is the greatest bar to the rapid growth of our honey trade, and the unfortunate thing is that producers of one of the most palatable foods should by crass negligence spoil the trade. During the past two months I have sent out many specimens of glazed sections, and I hope they will have some influence in the coming season. The various devices of boxes, cases, &c., which are now offered by our appliance dealers are useful and save labour, but to the progressive bee-keeper who is endeavouring to extend his sales and augment his profits, I say:—"Grade your sections and glaze them yourself, and act up to the golden rule of selling to others as you would have them sell to you."—W. WOODLEY, *Beedon, Newbury.*

SOME ESSEX NOTES.

[4752] *Foul Brood and Compulsory Powers.*—Only those able to fully realise what foul brood is, can understand the feelings of a bee-keeper on finding his hives affected with that dread bee disease. The feelings of his position are portrayed in the letter of Mr. Richards, of Cardiff (4743, page 145), whose case may be taken as one more proof of our need of compulsory powers for dealing with foul brood.

As Mr. Richards asks me to reply to the several questions enumerated on page 145, I do so as follows:—1. There is little worth knowing with regard to this disease and its treatment that is not mentioned in the "Guide Book," but I may add a word to say that in all our efforts in the way of curing affected bees we should aim at perfection; then, though we miss our mark, we shall have some reward left us for our labours. This may be applied to everything connected with bee-keeping, seeing that all our efforts for eleven months of the year revolve, as it were, round the one other month. 2. No one race of bees is less susceptible to foul brood than another. An all-round good strain of bees is, of course, better able to fight any enemy than a poor strain, for these latter usually lack vigour of every sort. 3. The time required for foul brood to reach the spore stage varies at different seasons from three to six weeks, but as the few affected larvæ that are first attacked with the disease in a hive usually remain unnoticed by the novice, these may reach the spore stage before the bee-keeper knows that his bees are infected.

4 and 5. The reply to No. 3 pretty well covers these too. It is very unsafe to give "signs" for the guidance of novices in bee-keeping, as only the man who has had practical experience with foul brood can read or understand the signs that afford reliable evidence of the disease. The inexperienced hand should study well a good text-book and lean upon it for support in his efforts. But a text-book

is of no use to a bee-keeper who does not follow the advice given in its pages. He is like a doctor to a patient, when the patient empties the medicine—prescribed by his doctor—down the sink! as one I know did.

During the past week two further cases have come under my notice in proof of the disastrous effects resulting from a really bad case of foul brood in the spore-stage upon the immediate neighbourhood. In both cases a badly diseased stock was carefully destroyed in order to guard against risk, hoping that other healthy stocks had not been infected, but after several months a latent germ made its presence felt, and it was the "old story" of disaster.

Decoy Places for Swarms.—With reference to Mr. L. Quayle's inquiry (4734, page 126), I may say that I gather from photographs of Mr. Quayle's apiary that his bees are kept on the roof of a building, and that—as there is usually an inclination on the part of swarms to rise—circumstances often make this necessary. This tends to cause the swarms to cluster in high places where they can only be secured with difficulty.

Inflammability of Celluloid.—A Dumfriesshire bee-keeper (4,733, page 126) quotes from an article in the *Queen* on this subject. I have since spoken to a cycle fitter about it, and he said, "Yes, I quite believe that celluloid would fire if exposed to the sun for any length of time on a very warm day." And he demonstrated the inflammability of celluloid by picking up a cycle handle made of this substance and bringing it near a small naked light, when the flaring of the celluloid handle was like that of a small lamp.—Wm. Loveday, *Hatfield Heath, Harlow, Essex.*

LOSS OF QUEENS IN SPRING.

[4753.] In reply to Mr. A. H. Miller, who writes on page 153 of last week's Bee Journal, I have had queen-cells raised this spring through the loss of queen. I noticed the loss of queen almost at once by the action of the bees, but left the hive alone for eight or nine days when, on examining the combs, I found several queen-cells. I united the bees, however, to another stock, as it was too early for the queen to get mated.

I have lost five queens this spring, mainly, I think, through the excitement of bees when taking an airing flight after being confined to their hives for some time through cold weather (as noticed by myself in giving "My Experiences of the Season of 1901," vide B.B.J. of November 28 last, page 473). I believe that Mr. Miller's is a similar case. His old queen may have been lost twelve to eighteen days when found outside the hive. If the young queen seen in the hive was raised from a three days old larvæ, the old queen might have been lost about twelve days, but if raised from an egg, sixteen to eighteen days. I believe that the capped brood (both worker and drone) were from the old queen, and the fact that there were no eggs or unsealed brood proves that the hive had been queenless for nine or ten days at least. If, however, Mr. Miller will watch the hatching out of the last brood, he might then suppose the loss of the old queen had occurred about twenty-one days prior to the date of hatching, supposing that worker brood would be the last to hatch, or about twenty-five days if drone brood.

With regard to the young queen found on combs, I believe it was unmated at the time of his writing to the Journal, but with a quantity of drones in the hive as stated she might get mated before getting too old. Of course, I quite agree with our editor's reply, but what made me write is Mr. Miller's enquiry if any reader had had a similar experience.—J. Berry, *Llanrwst, N. Wales, April* 19.

"NOVELTIES FOR 1902."

[4754.] Under the above heading in the B.B.J., April 17, page 154, I notice a short description of a cardboard cover for hive roofs. I see also that this cover was shown at the recent B.B.K.A. conversazione by Mr. Knight (B.B.J., March 27, page 123), where it is stated that he "had designed a simple thing in the shape of a cover for hive roofs." I should like to point out that at the "Bath and West" Show held at Croydon May 22 to 27 last year, I exhibited a hive roof-cover which I had designed, made of Willesden waterproof paper tacked over a light wooden framework. This paper is itself "waterproof," therefore paint or tar is not necessary, although I consider it an advantage to give it a coat of paint. I described these roof-covers, which I called "umbrellas," in the B.B.J., February 14, 1901, page 66, and I have had them in use for over two years. Besides forming a perfect protection from the wet during the winter months, they may also be used in the hot weather as "sunshades" by raising them a few inches from the hive roof by means of small blocks of wood. I do not know what is the cost of Mr. Knight's "novelty" (?), but the cover which I exhibited last year can be made for a few pence.—G. S. Newth, *South Kensington, S.W., April* 18.

THE "EDWARDS" SWARM-CATCHER.

[4755.] I trust you will kindly allow me space to announce that, in consequence of expert engagements, I shall be unable to supply any more "catchers" for use this season; but that I have made arrangements for three appliance dealers to supply a limited number to fit *hives of their own manufacture only.* An advertisement on another page in this issue gives particulars.

May I also remark that the report of the B.B.K.A. *conversazione* seems to convey the wrong impression that the appliance will be free and open for any one to make. This is not so. I expect next season (if reports justify that course) to allow every appliance-

manufacturer to make "catchers" for use with hives of their own make (correct fitting being a *sine quâ non*), but subject to a small royalty to me, which will be continued until I have recouped myself for the time, trouble, and expense of perfecting the appliance and placing it on the market. The labourer is worthy of his hire, and, being neither millionaire or philanthropist, the amount of time and money that I can spend without looking for some return is comparatively small; and, if the appliance proves to be the boon I fondly hope it may be shown to be, I think it will not be unreasonable to expect those whom it will benefit to "foot the bill." With that I will be content.—H. EDWARDS, *Shrubs Hill, Sunningdale.*

AMONG THE BEES IN ESSEX.

A SHORT TOUR WITH THE COUNTY EXPERT.

[4756.] As our county expert, Mr. Withycombe, is making his spring tour, it has been my privilege on one or two days to cycle round with him on his visits to apiaries. Sometimes, the weather was so cold, hives could not be opened at all; at others only during the short duration of sunshine which helped to warm the atmosphere.

Generally speaking, the bees were in good condition. Some were wanting food, and also hives were badly in need of new blood to make the industry a successful one. Several were queenless, but contained brood and no eggs; an exception was that of a hive with four frames almost full of drone brood with a virgin queen. As the owner had no fertile queen to replace the virgin, the latter was taken away and a frame of brood and eggs was given from another hive to afford the bees a chance of raising a new queen. A queenless skep had a triangular piece of comb with brood and eggs inserted into one of the combs cut for the purpose. Another skep was queenless with only a few bees, which was placed over a skep with which they might unite. *Braula cœca* and *Galleria cereana* frequently came to the front; the latter was doing its best to destroy comb and larvæ by tunnelling through the cells, while the former was content to be perched on the back of a bee and enjoy a switchback ride. One case of foul brood was found in the incipient stage.

It must be very discouraging to an expert to see the neglected condition of the bees sometimes. The owners pay for advice by subscribing to the County Association, and very frequently do not heed it when given. There is a case where foul brood has broken out each year, being detrimental not only to the bees and their master, but to other bee-keepers too. Mr. Withycombe has, by his kindness, very often done a great deal more than his usual work of manipulation, and I think all the members of the association should recognise that fact, and endeavour to enhance the good work being done by the associations in the country, not only as a duty to themselves, but to their neighbours. I saw many floorboards cleaned, and other items attended to, where some could not do them for obvious reasons. But notwithstanding the carelessness of a few, there were many who were very enthusiastic; in some cases the wife did a good deal. One good lady, who was in company (limited) with her husband, not only helped in bottling honey, extracting wax, and selling them, but manipulated the hives, which were numerous. She had also managed to dispose of all the honey and wax of the twenty-one hives at good retail prices.

(*Continued on page* 166.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The owner of the apiary depicted on next page has brought back to our mind "a day among the bees" very pleasant to recall, though we have since then had a second and similar experience in the same picturesque Worcestershire bee-garden. There, amid scores of hives scattered about on a hillside so steep as to make foothold no easy matter for an "examiner" not so young as he once was, and a "bee-chat" held during the interval for so homely a lunch as Mr. Millward describes—with "dessert" of luscious plums dropping from the laden trees beneath which we sat—and the "oral exam." held in the veteran bee-man's workshop, constitute a "memory" among many such we hope to retain long after our active bee-work has ended.

For the rest, we need add nothing to Mr. Millward's "notes," as follows:—

"In my childhood I remember my father kept bees in straw skeps, and patronised the sulphur pit with painful regularity. My interest was aroused in modern bee-keeping by accidentally reading a book on the subject while at Saltley College in 1884. In 1886 I became located as country schoolmaster at Chaddesley Corbett, and during the summer of that year I was taken in hand by Mr. Edward Corbett, a bee-keeper with a large experience, a large heart, but hiding his bee-keeping light under a bushel of modesty. Passing through most of the failures and disappointments of beginners, I was persuaded in a lucky moment to join the Worcestershire Bee-keepers' Association, and from that time my success with bees has been constant. Pleasant chats with other members, visits to other apiaries, hints from the expert, and experience gained at the shows all served to stimulate enthusiasm and improve my acquaintance with bees, and culminated in my obtaining the coveted third-class expert certificate.

"The photo, which is by Mr. Harold Pratt, one of my old scholars, shows my eldest son assisting me with the work. He is an apt pupil, and as I am so much occupied now in expert work for the association, he has a considerable amount of our bee-work at home to do. Unfortunately he suffers terribly if stung

—aggravated, I fancy, by my lack of sympathy, as it is many years since a sting had any terrors for me.

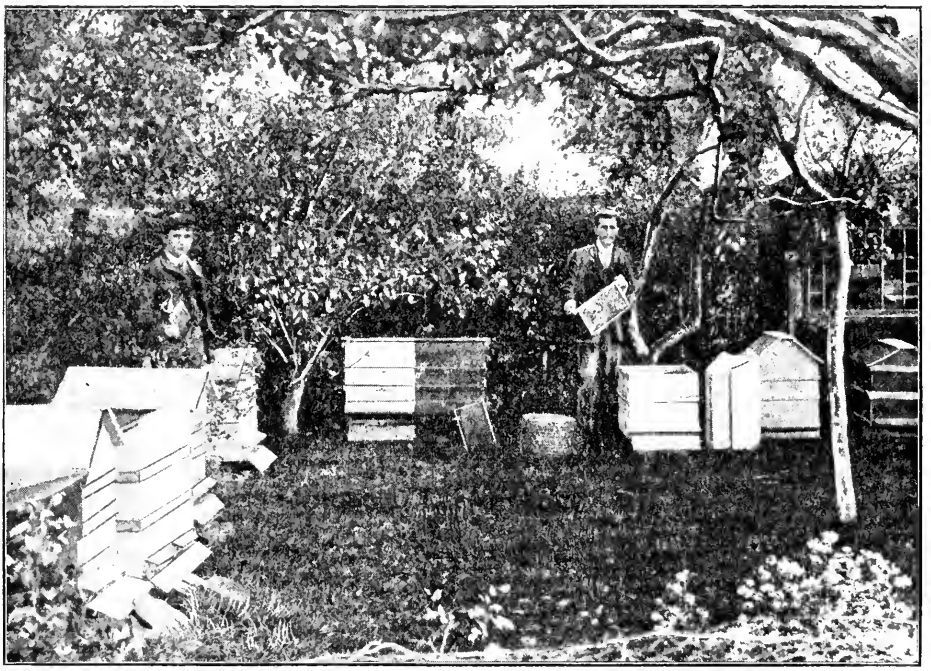
"We have no difficulty in selling all the honey we can produce. Some day I may be tempted to inflict my advice on the readers of the JOURNAL on this subject.

"As regards the financial aspect of bee-keeping, my opinion is that any industrious person of ordinary intelligence can make bee-keeping a paying hobby in more than the ordinary sense, but I do feel that it is detrimental to the best interests of bee-keeping when people spread fairy tales about the vast profits that can be made by investing in hives of bees and staring at them. My neighbours are fully aware that I am getting money out of my hobby, but I fancy they sometimes doubt whether it is worth all the long hours of hard work. But then they are not all enthusiasts.

"In conclusion, if I am to select my most delightful experience as a bee-keeper, it was the 'chat' we had when eating bread and cheese, and drinking a certain brownish fluid under a hedge, with the genial 'W. B. C.,' who presides at present in the Editorial chair. Gentle Reader, do not despise us. It was homely fare, and all we had or *could* get. We were hungry and thirsty with our work, and the anxious excitement of the day in that out-of-the-way apiary, but we talked 'bees' and were happy. I fear the incident, if told here, may come under the Editorial ban as 'merely personal,' but on the off-chance of its possessing sufficient interest to keep it from being consigned to the w.p.b. I will relate it, as I am not the only one who looks back on that day's experiences with great pleasure :—

"The event occurred at a picturesque out-apiary, located in a fruit orchard a mile or two north of Worcester, on May 29, 1897. You were examining several of us hopeful candidates for our 3rd Class B.B.K.A. Certificates, and dinnertime arrived before we could finish the practical part of the work among the bees. There being no house near to which we could adjourn for refreshment, some one produced bread and cheese and a *brown jar*. I particularly remember the Rev. E. Davenport's look when the latter was brought forth. However, he modified his views slightly when our examiner consented to partake of the homely glass of beer along with the rest, and we offenders went so far as to start a volunteer off to get the jar replenished. I must, however, free our worthy examiner from participation in this dreadful performance, except that I have a distinct recollection of his being an accessory *after the fact*.

"He may, however, be interested to learn that the particular group of bee-keepers whom "W.B.C." earnestly addressed that day are now the backbone of the Worcester B.K.A., and have raised it from its dying ashes of 1898 to vigorous life in 1902."



MR. EDWD. A. MILLWARD'S APIARY, CHADDESLEY CORBETT, KIDDERMINSTER.

(*Correspondence continued from page* 164.)

As one would expect, we saw hives of patterns galore. One rustic hive was very interesting; it was part of the trunk of a tree cut transversely, and with the centre of the stem cut out for the frames. The top of the hive was made to taper to a point, thus representing a house somewhat like an Icelander's hut. Many of the members treated us most hospitably, and unless it were accepted we felt that we had gone away without adding to the warmth of the friendship already evident.

The weather has now become much warmer, and bee-forage is getting more plentiful.—A. W. SALMON, *Cushfield House, Chingford, April* 19.

REMOVING BEES FROM TREES.

A WORD OF CAUTION.

[4757.] During the last few days a quite unique experience, so far as I am concerned, has come under my notice. A friend of mine who has just started bee-keeping told me of a stock of bees being located in a hollow tree some 30 ft. from the ground. He expressed a desire to have the bees hived in a frame-hive, and requested my assistance in the operation. We went to the tree in question fully armed with the necessary implements to secure the bees and remove the comb, then fix up those with brood in the frames. All went well while the outermost combs were being removed, but I was suddenly assailed by a most disagreeable smell which I felt sure must proceed from "foul brood." The removal of the the next comb proved the truth of this belief, for in it I found brood in the most advanced stage of the disease. Five other combs were equally affected. Needless to say, my friend did not get the bees hived. Judging from the combs I should say the bees had been in the tree for four years, as I could plainly mark each year's growth. The combs were about 30 in. deep, and contained about 40 lb. of honey.

During my residence of over two years in Cornwall I have frequently come in contact with skeppists, who have told—with great pride—that "during all the years they have kept bees, they have never had foul brood in the apiary." In fact, they say "it is impossible for bees in skeps or places other than frame-hives to be affected."

The question is, "Would these conservative bee-men know, even if every hive in the apiary were badly affected with the disease?"

The above experience will surely prove the folly of the skeppists' statements. At the same time, it would, perhaps, be interesting to know if any others of the readers of the B.B.J. have ever found foul brood under similar circumstances.—WM. GIBSON, *Truro, April* 18.

P.S.—I enclose sample of comb.

[The cells of comb sent (a small piece only) contain no dead brood in what is known as the "advanced" stage, but foul brood is rapidly developing in the unsealed larvæ.—EDS.]

BEE-STINGS AND INFECTION.

[4758.] The letters which have appeared in your journal on the above subject (pages 147 and 153) are interesting. Personally, however, I do not think that there is any possible ground for supposing that bee stings can have any effect whatever in preventing attacks from infectious diseases. The latter are the direct result of the invasion of the body by specific living organisms, which differ from each other according to the disease they produce. On the other hand, though the poison of a bee-sting may be a powerful antiseptic, it is generally administered in such minute quantities as to be useless when distributed throughout the whole human body, and is, moreover, probably removed in a very short time by the excretory organs. I have, however, had considerable confirmatory evidence of the benefit acruing to sufferers from chronic rheumatism by being stung, and have experienced such benefit myself.

As regards the conditions mentioned by your correspondents, viz., smallpox, vaccination and influenza, I suppose I get as many stings as most folks, and have not had smallpox. I suffered severely, however, when I recently re-vaccinated myself, and I am a martyr to influenza, as no sooner do I get a few cases—or many—on my books than I contract the disease myself. It is a notorious fact that vaccination and re-vaccination are the only known preventives of smallpox, but the vagaries of the latter operation are extraordinary, and very difficult to explain or account for, and are not, perhaps, a suitable subject for discussion in your columns.—(DR.) PERCY SHARP, Public Vaccinator, *Brant Broughton, Newark, April* 21.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Le Rucher Belge (Belgium).—Hornets are dangerous enemies to bees; they catch them while at work upon the flowers, or just as they are returning heavily-laden to the hives. They show great agility, and seem to distinguish those bees which are carrying the largest store of honey. They have even been known to penetrate into the hives, taking both bees and honey. The best time to destroy this insect is in spring, when every hornet that remains is a fertilised queen and will become the founder of a nest. Last year the writer had a good opportunity of observing the ravages committed by some hornets located in a hollow tree, about 500 yards distant from his apiary.

There would often be as many as half a dozen at the same time about the hives, catching the bees just as they were about to alight, and then flying off with their victims to their nest in the hollow oak tree. A few lighted sulphur splints thrown into the hollow and the entrance-hole securely closed, eventually put an end to these audacious thieves.

Illustrierte Bienen Zeitung (Germany).—The summer of 1901 in East Prussia has been especially hot and long, and marked by irritable conduct of the bees in this locality towards man and beast. This has often been proved to result from the exposure of comb from which honey has been extracted near the hives. Besides several unimportant cases, two of some consequence took place. The bees belonging to the schoolmaster in a village in Eylan attacked two valuable young horses. One died in consequence, and the other was blinded, and, of course, of no further value. The owner of the bees had to pay £30 compensation. About the same time the bees of another schoolmaster attacked three horses belonging to a neighbour. The misfortune was soon remarked, and the horses were taken away to a place of safety; still, for some time they were unfit for work, and the cost of veterinary advice and the loss of value of the animals led to a claim of £6 7s. Happily, this bee-keeper was *insured*, and received the whole sum from the insurance company. The account ran thus:—

First account.—2½ days at 10s. per day	£1	5	0
For better food and care	1	0	0
One quart of spirit to rub the injured parts	0	1	0
Second account.—Loss of value through bare places in the hair, &c.	1	10	0
For better food to bring the horses round	2	5	0
For vet. surgeon and certificate	0	6	0
Total	£6	7	0

Bulletin de la Société d'Apiculture de la Somme.—A receipt for a gargle much recommended for ulcerated sore throat or mouth:—

Tincture of myrrh	1 oz.
Tincture of camphorated opium	¼ oz.
Honey	1½ oz.
Barley water	7½ oz.

Mix well, and use several times a day.

Persicaria — Polygonum sakhalinense, otherwise known as Asiatic knotgrass, is an excellent forage plant in dry seasons. It is propagated by dividing the rhizomes in spring or autumn. The stalks die down in winter, but the stock resists winter frosts as well as the summer drought. The growth in spring is rapid, and the plant requires no attention whatever. The young shoots, something like asparagus, are edible, and the flowers are good pasture for the bees.

Leipziger Bienen Zeitung.—Propolis a remedy for corns.—Spread the propolis thick on a piece of linen, and lay this on the corn. After a fortnight's application the corn will have disappeared.

The same.—The war office in Belgium has advertised for 1,200 lb. of honey, white or pale in colour. A guarantee of 700 fr. is required with the offer. What does the war office want it for? is an interesting question. Can any Belgian bee-keeper gratify our curiosity?

Revue Internationale d'Apiculteur.—There is to be an international exhibition of apiculture in Madrid during the whole of the month of May, 1902. Prices of honey and wax at the market in Barcelona in December, 1901, were as follows:—Native wax, 2s. 5d. to 2s. 6d. the kilo. (2 lb.). First-class (Arragon) honey, by 100 kilos., about 42s. to 45s.; second-class (Catalonian) honey, 100 kilos., about 38s. to 42s.

Bienenwirthschaftliches Central Blatt (Germany).—Under what conditions the bees work red clover. The tube of the corolla of red clover has a length of 9 to 10 millimeters, and the bee's tongue only measures about 6 mill. So the bee can only reach the nectar when it fills the tube to a height of 3 or 4 mill. In rich pastures this occurs when warm fine days succeed heavy showers of rain. The same may be said of the blossom of the common lilac. When small beetles have perforated the corolla tube of the red clover the bees can work the honey it contains. In examining the flower closely, it may often be observed that a very small beetle has bored a tiny hole in the tube to emerge from it. The humble bee also bores holes in the clover tubes and in other plants, thus showing herself to be the true pioneer of the honey bee. It may be remarked that the same family of plants does not yield the same amount of honey every season, and this may account for the fact that bees are not found every year to be working the red clover.

Elsass - Lothringischer Bienen Zeitung.—The *Nahhla* gives some interesting particulars as to the honey-bee in Guadeloupe (Great Antilles). Bees have been imported into the island more for their influence on the fertilisation of the cacao and coffee plantations than for their honey, although they gather honey in abundance. Great numbers of blossoms are fertilised by them, which would otherwise be lost. The coffee plantations, where bees are active, often bear double the quantity of berries and yield regular harvests. Before the introduction of bees flowers were produced abundantly, but little fruit.

Praktischer Wegweiser.—Among the exported products of the Japanese islands is the fruit of the wax-tree, much used there in the manufacture of candles. The tree resembles the crab-apple, and grows on the edges of cultivated land, especially in the province of Kinchin. The tree loses its foliage in autumn, but in October it is covered with berry-like fruits. These are gathered, dried

in the sun, and then sent to a factory where the wax is extracted; but before this can be done the berries have to be kept at least two years. The longer they are kept the better wax they produce. This wax is much used to adulterate bees'-wax in the manufacture of wax-candles, comb-foundation, &c.

Queries and Replies.

[2829.] *Transferring Bees.* — Having followed your kind advice given me last winter, I yesterday placed a "cast" of last May (in a skep) on top of a "W.B.C." hive, packing the latter warmly and finally putting the roof over skep and all. As bees in skep seemed to have hardly any honey, I afterwards placed a feeding bottle with about ¼ pint of syrup (medicated) over skep, having first cut a circular hole in it. 1. Have I done right, and would you advise me to continue feeding till fruit blossom is all out? Weather is dull and rainy. 2. The bees in other skep (a large swarm of last May) do not seem very flourishing. I inverted skep and looked among combs, but as I am only a beginner, am not much the wiser. There was no honey that I could see, but I found a small patch of sealed brood, the cappings not being flat but bulging. Is this usual? The other combs were so full of bees I could not see very far up. There are plenty of bees in the skep, but they are not so industrious as my two other colonies. I placed this skep also on top of another frame-hive, previously prepared, but have not yet fed them. Should I do so? They had heaps of honey last autumn. Would they raise a queen now if they are queenless? 3. In my old hive there is a slight touch of foul brood, so I put naphthaline on floorboard, and fed them with medicated syrup, which they took at first, but now refuse; they took about ½ pint. I should like to give them two new frames fitted with full sheets of foundation. When shall I do this, and where place them in brood-nest; and which combs shall I take away to make room for new? The hive has ten frames, and bees cover nine. This is a good district for fruit blossom. The bees are working well. Thanking you in anticipation.—B. Purvis, *Old Hall, Boreham, Chelmsford, April* 21.

Reply.—1. Whether you have done right or not depends entirely on the condition of the bees in skep. If they are very strong in numbers all will be well, otherwise it would have been better to defer operations for two or three weeks. What you have done will tend to retard the transferring of the brood-nest below, if the colony is not beginning to need more room for brood-rearing. 2. If the cappings of brood seen in the other "not very flourishing" skep appear as stated—"bulging out"—you must make sure it is not drone-brood being reared in worker-cells, because in the latter case the stock will be worthless. 3. If the third stock mentioned is diseased, even slightly, you should give no additional frames of foundation while endeavouring to cure it.

[2830.] *Feeding Bees in Skeps.*—I have a stock of bees in a straw skep, and have been feeding them with syrup since April 3. This evening on removing bottle to refill I found that during the day the bees had commenced building comb on the muslin which covered mouth of bottle, as you will see by the enclosed. I will be very pleased if you will tell me what it is a sign of, and what had I better do. I gave them the usual dose of syrup this evening, but if the same thing occurs to-morrow I will discontinue feeding until I hear from you. I believe this hive gave off two swarms last year and was then left to itself, so that it had all the honey gathered for winter stores. I have only had it since September. Fearing that they might possibly be short of stores and being very anxious to winter them, I gave them some soft candy on February 28, and they consumed almost 2lb. during March, and then on April 3 I commenced feeding with syrup. They appear very strong in numbers, and have been bringing in large quantities of pollen for some weeks. 1. What do you think is the cause of them building comb in this manner? Do you think they can possibly want more room already? 2. As they seem so anxious to commence comb-building, would it be any use giving them a rack of sections fitted with foundation to draw out, as I want to take advantage of the fruit blossom, which will be out soon now. I am only a novice, and very anxious to be successful. — G. Smeddles, *Liverpool, April* 16.

Reply.—1. It is quite common for bees to build comb at this season in any vacant space where they are in the habit of feeding. In this way the vacuum left after a box of candy has been consumed is found "full up" with newly-built comb. They do not often attach cell-walls to the muslin covering of the feeding bottle—as in your case—but it merely shows that bees in April are possessed of the "comb-building impulse." 2. Do not give sections till honey is obtainable from natural sources.

[2831.] *A Beginner's Queries.* — Please oblige me by answering the following through the B.B.J. which I am reading weekly:—1. Is a "Doolittle long-tongue Ligurian" superior to other varieties of bees? 2. Is the galvanised wire netting used for fencing and pea-guards hurtful to honey if used for cages for an extractor? 3. Would it damage the honey if the frame which holds the cages is made of iron? I have read the "Guide Book" and think it is excellent for a would-be bee-keeper. I have worked the bees well since I have had it.—A Beginner, *Havant, Hants, April* 17.

Reply.—1. We do not quite know what bee

is meant by the term "Doolittle long-tongued Ligurian." Our impression is that Mr. G. M. Doolittle has little faith in the "long-tongue" theory with regard to bees; and we agree with him in that respect. 2. The wire netting used in extractors is usually galvanised and does no harm to the honey. 3. The same remark applies to the iron frame; these are made of iron galvanised.

BEE-DRESS FOR WOMEN.

There is no disputing the fact that in bee-keeping men have a decided advantage over women in the matter of dress. It is so much easier for them to dress cool and comfortable, and also protect themselves from stings, than it is for women. I have envied Dr. Miller more than once, on a sweltering hot day, as he walked around attired in a pair of painter's white overalls, the latter tucked in his socks, as a protection from stings. He looked so cool and comfortable—perhaps he did not feel so—but he looked tantalizingly cool, at any rate.

But women can do much to make their dress comfortable by a little thought.

Do not wear heavy skirts that take about all your strength to carry around. I have found a light-weight worsted skirt the most satisfactory. Duck skirts are comfortable, but they soil easily, and are not very easily laundered. A worsted skirt and a shirt-waist, however, make a very satisfactory rig.

A large denim apron covering you completely from head to toe is indispensable. Make it long enough to reach the very bottom of your dress, so that if a little honey drips on your apron it will not lodge on the bottom of your dress-skirt on its downward course.

Denim is the best material I know of for aprons. I formerly used ticking, but I like denim better, as you can get it in plain colours. The last ones I made of plain brown denim were very satisfactory. Either denim or ticking wears well, and neither allows the honey to soak through readily. And when you slip out of your apron, after your day's work is done, you present quite a creditable appearance, which is something dear to the heart of a woman, especially if you are at work in an out-apiary and have a long ride home before you.

My aprons are cut by one of the Butterick patterns (No. 3696), and they are ideal aprons for the apiary. After thoroughly testing them for years I would feel lost without my big aprons, with their generous pockets. I wish dressmakers would give us some such pockets in our dresses, they are such a comfort; but no, Dame Fashion has doomed us to go pocketless. What do I use those pockets for? Well, I am not going to tell you all I put into them, but one thing I do use them for is to carry my hive-tool. I think it would be often lost but for those pockets.

One very important item in your outfit is gloves. I have tried a good many kinds, and wear a pair of light-weight buckskin at present. For quite a while I wore a common white glove. I do not know whether it is sheep-skin or hogskin, but it had a very disagreeable odour. But for that it would be a good glove, as it is, I much prefer the light-weight buck-skin.

I sew a pair of white sleeves around the top of the gloves, having the sleeves long enough to come well up on my shoulders. I have a strap sewed from one sleeve to the other across my back. A similar strap across my chest is sewed to one sleeve, and buttoned to the other. This is a convenient arrangement; it takes very little time to slip my gloves off or on, is perfectly bee-proof, and keeps the sleeves of my dress clean.

The reason for having the white sleeves are preferable because bees will rarely sting anything white. I have about half a dozen pairs of sleeves, and as fast as one pair becomes soiled I rip them off and sew on a clean pair. The gloves themselves can be washed any time. It is more convenient to have two pairs, as ensuring one pair ready always for service.

A comfortable pair of shoes must not be overlooked. Never get shoes with high heels. Those with rubber heels are extremely comfortable. If you cannot get these you can have the rubber heels put on by your shoemake for 50 cents a pair.

I am very fond of wearing low shoes and slippers, and many an unnecessary sting I get in consequence.

We must not forget the bee-hat. I like a broad-brimmed straw-hat with a veil of net sewed around the brim, and a rubber cord run in the hem around the bottom of the veil; a safety-pin caught through the hem passing over the rubber cord in front, ready to pin down securely to my apron, pulling it down tight enough so the rubber cord will be drawn taut, then I feel sure no bee will be able to get under my veil.

One advantage a woman has over a man is that she can use a hat-pin to pin her hat on, and that is a comfort. You are sure your hat is not going to tumble over your eyes at a critical moment when both hands are full. Let us score one for the women on that point.

One trouble I have is to get a hat with a crown small enough so that the hat will not rest on my ears. I don't see why some accommodating soul doesn't make a few hats especially for women.—EMMA M. WILSON, in *American Bee Journal*.

TRADE CATALOGUES RECEIVED.

F. SLADEN, *Ripple Court Apiary, near Dover.*—Mr. Sladen's Catalogue for 1902 (fifth edition) is, as usual, a tastefully and admirably got up list, the greater portion being devoted to his own specialities rather

than in the way of special strains of bees and queens raised in his own extensive apiary on the south coast, and imported ones of his own selection. Several pages are also devoted to "honey plants," embracing farm crops for bees; honey plants for apiary and garden; and suitable trees for bee-forage. Altogether it may be said that the list before us is a special one, reliably written, and compiled by one who is thoroughly well versed in the several subjects dealt with.

J. S. GREENHILL, 80, *Graham-road, Wimbledon.*—Mr. Greenhill terms his list an "up-to-date" catalogue, and, although consisting of but twenty pages, it fully bears out the title. Nothing is included that can in any sense be termed "out of date," for the maker's experience of twenty-seven years with Messrs. Neighbour made him fully acquainted with all that is best in the trade, and his exceptionally long experience as the practical bee-expert of that firm will give confidence to those who need help in bee matters. The list, though short, as stated, contains all that is needful in bee-goods of every kind.

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close May 17.**

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries close April 30.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

R. L. S. (Formby, near Liverpool).—*Dampness in Hives during Winter.*—The dampness complained of probably arises from the sparseness of bees in the hive. It is a well-known truism that the best packing for bees is *bees*, and you may take it from us that if there had been enough bees to cover the combs on which they were wintered the amount of condensed moisture on the hive-sides would be infinitesimal. This is especially the case when space is provided below the frames in winter. Your mention of "dead bees and maggots on the floor-boards" shows that the dead bees must have lain there for months past, seeing that the "maggots" referred to have no connection with bee-life. They are the larvæ of insects that generate in decomposing animal matter of any kind. We advise you in future to leave only so many frames as the bees cover well when packing for winter, and do not open the hives at all in early spring unless some special need should arise for so doing.

S. H. FOSTER (Swinbrook Vicarage).—1. *Bees Deserting Hive.*—The comb sent contains nothing worse than mouldy pollen. Probably the bees have left the hive and cast in their lot with the robbers that carried off the food. This is what not seldom happens under such circumstances. 2. *Preventing Swarming.*—Various appliances have been devised for preventing swarming, particulars of which may be seen by any reader of our pages—some in present issue—but a bee-keeper to succeed must possess a guide-book on the subject wherein all the best plans are fully dealt with. We cannot occupy space with instructions that nearly all readers possess, and, as already said, success depends on knowing what to do at the right moment.

J. THOMSON (Ayr).—*Doolittle's Book on "Queen Rearing."*—When replying to a former inquiry on this matter we were not aware that the book could be had in this country; we now learn, however, that it is stocked by Mr. Geo. Rose, Bee-Appliance Manufacturer and Seedsman, Great Charlotte-street, Liverpool.

J. B. HAMILTON (Bury, Lancs.).—*Buying Honey.*—It is against our rule to give names of correspondents who write under a *nom de plume*. We will, however, be very pleased to forward a letter from you to "Ebor" (4742, page 144) if sent to this office, sealed.

CONSTANT READER (Kendal).—*Suspected Combs.*—1. Foul brood is rapidly developing in the unsealed larvæ, but, so far from its being in the spore-stage, as supposed, it is only just breaking out. The symptoms shown in comb are so plainly described in "Guide Book" that no mistake can be made by any one reading them. 2. Soluble phenyl may be obtained from Messrs. Morris, Little, & Co., Wholesale Chemists, Doncaster, price 6d. and 1s. per bottle. 3. If the stock is strong in bees, and other combs in the hive show no worse form of the disease than your sample, you may with advantage take the steps proposed to save them.

E. N. (Abergavenny).—Foul brood is rapidly developing in comb sent. Unless the bees are strong in numbers it will be useless trying to get them to build out combs from comb-foundation at this early season. Nor should you make an attempt to cure, in any case, without making yourself acquainted with the nature of the disease and its very infectious character.

H. W. WELLINGTON (Undy Magor, Mon.)—There is no disease in comb sent.

Editorial, Notices, &c.

CUMBERLAND B.K.A.

ANNUAL MEETING.

The first annual meeting of the above Association was held at Workington in the St. Michael's Parish-room (by permission of the Rector) on April 12. Lord Muncaster was re-elected President, and the Vice-Presidents elected were as follows:—The Earl of Lonsdale, the Bishop of Carlisle, Rev. Canon Rawnsley, Archdeacon Sherwin, Rev. H. V. Elliott, the Hon. Colonel Stewart, Sir Wilfrid Lawson, Bart., W. Lowther, Esq., M.P., Jas. R. Bain, Esq., M.P., R. D. Marshall, Esq., J.P., C.C., D.L., T. Hartley, Esq., J.P., C.C., the Provost of Eton, Thos. Carey, Esq., C.C., A. Mitchell-Dawson, Esq., C.C., and Frank E. Marshall, Esq.

The Executive Council for 1902 was also formed, with Rev. Canon Rawnsley, Chairman; James Thomson, Vice-Chairman; George M. Saunders, Hon. Sec. and Treasurer; Jos. F. Hope, Hon. Auditor; and J. Gray, Lecturer and Expert.

Hon. Local Secretaries were also appointed.

The reports for 1901 gave a membership of 109. Mr. Gray made a successful tour (visiting 114 apiaries), but most of his time was taken up in treating stocks for foul brood, which had been introduced into the Keswick district nearly five years ago, and seemed likely to ruin bee-keeping altogether. Of fifty-six apiaries inspected, thirty-five were found to be infected, and of 150 stocks, eighty-five were diseased. There were an additional thirteen infected apiaries in districts round about. It was mentioned that the Association will act liberally in the way of helping any bee-keeper who, not having yet joined, may have stocks badly infected.

The thanks of the Association were also offered to the Technical Education Committee of the County Council for their grant, and to those County Councillors who have gone to personal trouble and expense in assisting the Association.

Also to the Cheshire B.K.A., who, through the courtesy of the Rev. E. Charley, their hon. secretary, have kindly allowed the Association to practically adopt their rules, and in other ways. Cordial acknowledgment was made of the help given by Mr. John Vicars, who originated the Association in response to an appeal from Mr. J. Branthwaite, of Arlecdon, in the BRITISH BEE JOURNAL (vol. xxviii., page 195). Mr. Vicars went to considerable trouble and initial expense, which he has generously born himself in starting the Association.

The meeting closed with votes of thanks to the Rector for use of the room and to the Chairman.—GEORGE M. SAUNDERS, *Hon. Sec., Cumberland B.K.A., April* 23.

BEE-KEEPING IN GLAMORGANSHIRE.

RESUSCITATING THE COUNTY B.K.A.

Mr. R. T. Duncan, of Barry, writes as follows to the *Western Mail* with regard to the resuscitation of the Glamorganshire Bee-keepers' Association:—

"The visit of the 'Royal' Show to Cardiff last year appears to have revived interest in apiculture in this part of the county, so much so that I find a keen desire existing to resuscitate the above association. The objects of the association would be:—1. To encourage and develop the production of honey in Glamorganshire. 2. To co-operate with the Technical Instruction Committee of the County Council for the promotion and delivery of lectures and practical instruction in bee-keeping. 3. To advocate the more humane and intelligent treatment of the honey bee. 4. To better the condition of cottagers in the agricultural districts by the encouragement, improvement, and advancement of bee culture. 5. The detection, stamping out, and prevention of foul brood (now reported to be very prevalent in the county). 6. To arrange for the attendance of the association's experts, with bee-tents, at the agricultural and horticultural shows held in the county. 7. To arrange for the appointment of competent judges of the honey classes at the different shows. An association with these objects, amongst others, should command the support of those who desire to see our rural industries improved and encouraged. The Board of Trade returns show that in the month of July last year we imported honey to the value of £14,000. It is estimated by Professor Cheshire that during the honey-flow two tons of honey are allowed to go to waste within a radius of two miles in certain cultivated areas. Surely this is sufficient evidence that we are allowing this, one of the most lucrative of agricultural industries, to be neglected. I should feel much obliged if you would allow me to use your columns to ask all those interested in this subject to send their names to me as soon as possible, so that a meeting may be convened in Cardiff at an early date. It has been suggested that each district should be represented on a general committee. I am, therefore, particularly anxious to hear from experienced bee-keepers in the different districts. Several well-known and influential ladies and gentlemen have promised their support, and I have already received the names of over thirty intending members."

[We are very pleased to learn that the visit of the "Royal" Show to Cardiff promises to bring about so gratifying a result as the above communication indicates. Our experience—gained by personal intercourse with bee-keepers who visited the show of last year—proves that Mr. Duncan's keen desire

is shared by numbers of others in the county. Moreover, bee-keepers of the best sort seem to be plentiful there.—EDS.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4759.] *Festina Lente.*—In bee-keeping this sententious saying (or its equivalent in good broad Scotch, "Ca' canny") is an excellent motto. Early manipulation is one of those mistakes too often made, especially by beginners, which result in detriment to the stock and loss to the bee-keeper. An almost irrepressible desire seizes on many bee-keepers to examine prematurely into the condition of their best stocks, and disaster too often follows. Many readers, seeing it stated that queens should be superseded every second year, decide to depose theirs, however well they may be doing, and they often replace them by others who fall far behind the deposed queen in laying powers. A certain race is "boomed" for a time, and in their eagerness for change, which is the fault of many bee-keepers, these are secured only to prove a delusion and a snare. Hives, guaranteed by their inventors to be pieces of perfection, marvels in the way of manipulative improvement, and containing a combination of countless advantages hitherto undreamt of, prove, when put to the test of practical experience, hindrances and not helps. Certain appliances, say some new section, is written up as something which is to revolutionise bee-keeping, and add some score of improvements to any hitherto on the market. But experience proves that it has at least that number of drawbacks and disadvantages when tested side by side with what has come to be recognised as the standard. I do not now, and never did, throw cold water on any honest attempts to advance apiculture in every possible way by taking advantage of every new invention, even supposed to improvements, on those hitherto in use. What I did, and now do, is to advise that, in introducing innovations, we should "hasten slowly!" Doolittle the other day put the matter pithily in the following sentence:—"It is always well to *go slow* in any new thing till we have proved it a success—then we can enter into it largely with confidence."

A Derelict Library.—Perhaps the above description of the B.B.K.A. Library is not technically correct, as the secretary knows where it is located and some of the Council may know something about its contents. I fear, however, few of the members are aware there is such an institution. No catalogue of the books exists and I have no hesitation in saying that this is a state of matters which imperatively demands to be remedied. Is it to be a second case of a bee library "food for worms?"

A Hundred per Cent.—How many bee-keepers I wonder succeed in pulling their full complement of colonies safely through the winter year after year? I never did, for each successive spring shows some dead, or, at least, a number so weak that I set them down as unfit for being reckoned on as honey-making machines during the current year, and they are accordingly joined up. Perhaps in heather districts this is almost an evitable result of the high pressure at which bees are wrought with a prolonged heather harvest closely following on a good and lengthy clover season. In such circumstances it is a matter of the utmost necessity that every queen should be tested and her laying powers gauged before the hives are packed down for winter. Even then accidents happen in the best regulated families.

Fair Flora's Favours.—These are now being showered on us in no stinted fashion, and meadow, woodland, and hedge-row are fast becoming gay once more with all sorts and conditions of flowers. In the floral world we now see the proud beauties of the field in "gay but quick succession shine." Here is a firmament of starry wood anemones, there a sea of yellow bloom where the wild primrose spreads its myriad flowers. The light lilac of the fair sweet cuckoo flower, harbinger of the bird whose name it bears, raises its lovely petals to view, while the more modest sweet violet hides its perfumed blossom. Thousands of others are just emerging from the clenched hand of the buds, and bees are revelling in a wealth of bloom and levying a tax from countless styles and stigma. Few, if any, flowers yet in bloom, unless the dandelion and fruit blossom, yield any honey. Weather during the first half of April was cold and wintry, vegetation being checked considerably by the icy touch of winter which held a grip of the chill air. Now a magic change is taking place, genial spring mantling the whole landscape in a dress of fresh and verdant hue.—D. M. M., *Banff.*

A PLEA FOR THE EXPERTS.

[4760.] As the experts of various County B.K. Associations will now have started on their rounds, it is a very appropriate time to bring forward, for the kindly consideration of the members who are visited, the "don'ts" and "do's" in connection with the work. I

have always had a desire to pen a few lines on the subject of my heading, but have refrained because, being an expert myself for the last eight years, it might savour of "axe grinding." This year, however, not being able to undertake a tour, I feel justified in contributing a few lines to your pages in order to help, if possible, my fellow craftsmen.

First, then, I would say to members, Don't keep the expert waiting in order that you may accompany him in his round among the hives. If busy yourself, let him go on examining the bees and join him as soon as you can. An intimation of probable day of visit is generally given, but do not forget that warm days and sunny hours in spring are often annoyingly few and far between. One experience of my own will illustrate what I mean. I was kept waiting for fully three-quarters of an hour on a beautiful day, while the gentleman finished his lunch; then, instead of joining me in the work himself, as I supposed was intended, he sent the gardener (which he could have easily done at first)—this, too, on a day when, being anxious to make hay while the sun shone, I did not stop for lunch-taking myself. This gentleman, too, was on the council of the county association for which I was then working. In this way, and from sheer thoughtlessness, I lost, or wasted quite a couple of days. Do not expect the expert to do the "spring clean" of your hives, put on supers, and "*just* make an artificial swarm" for you. Help the expert as much as possible by giving him as little extra work as you can. Assist also by holding smoker, or if a windy day by holding the roof to shade the bees as much as possible during manipulation. Do not ask him to "call again in an hour's time." You may be the last one to be visited in the district, and this will mean his time wasted. Should the expert not turn up on the day you expect, do not write off hand next post to the secretary, grumbling and asking *when* the expert *is* coming? Remember you are only one of a large number of members to be visited; also bear in mind that control of the weather is not among the expert's capabilities.

If disease is discovered amongst your stocks do not look disgusted and say disagreeable things. Be thankful that he has enabled you to take measures for its eradication without delay.

If it is meal time, do not overlook the fact the expert needs some refreshment; nor think him ungrateful if he rushes off immediately the last mouthful is swallowed. It is difficult to get meals in the villages, and a little consideration in this way is real kindness. Should he call late in the day and it is at all convenient, offer to put him up for the night. He will be more at home with you than in the village inn; it will also help him by saving expense. It is a great mistake to think that experts are making a fortune. The salary paid usually does little more than just cover expenses. During my eight years' respective "tours" I have not had £10 clear profit for the whole time I laboured on expert work.

To secretaries I would say, Treat your men with kindness and consideration; do not be constantly writing and saying, "You *must* get on." Showers, cold and windy days all hinder his work and prevent getting on. The weather varies in different parts of the county, so that it may be warm and fine where you are (especially if you are in an office with a nice fire in the grate), and may be raining hard just where the expert is working. Even if fine, it may be very hard work cycling. I have myself often ridden against a strong head wind all day, and when finished at night have been too worn out and tired to undress, but have slept in my clothes, this because of being anxious to get through as quickly as possible. The result is I am now suffering for my overwork. I should like to say very much more, but am afraid I have now exceeded bounds.—W. HERROD, *The Horticultural College, Swanley, Kent, April* 26.

SOME EAST KENT NOTES.

[4761.] The weather during the past fortnight up to Thursday, April 24, has been all that the most exacting bee-keeper could wish for. Calm, sunny days, followed by warm nights has produced an abundant supply of pollen, and the new honey drawn from the nectaries of the daily and hourly opening flowers has stimulated the bees in a way that no artificial supply can equal. For myself I cannot call to mind the time when brood-nests have been extended so rapidly.

But on April 25 there came a very unwelcome change for the worse, the wind veering round to north-east, and for the two following days it was blowing a perfect gale, knocking about and destroying the early fruit bloom; while the loss of bee-life in the battle with the elements must be considerable.

I find some personal consolation in knowing that in my little apiary the heavily-laden home-coming bees can enter their hives in comparative calm, as I have a screen at the back of the hives, 7 ft. high, made of riddled hurdles thatched with broom. This screen breaks the force of the wind, and helps the bees to reach the entrances. It also saves me from trouble with neighbours by causing the bees to rise high in the air.

Supering.—As soon as the weather again becomes settled I shall put supers on my "Ford-Wells" and two single 10-frame hives and a 12-frame one of the "W.B.C." pattern; in fact, I should have supered on the 26th, but for the change in the weather, as the brood-chambers have the full complement of combs all well covered with bees and brood. There is an abundance of fruit-blossom close at hand, and I am most anxious to avoid swarming. My other four colonies

are not so well advanced, being made up of driven bees I got for the driving, but having them late I did not get the "autumn raised bees" so essential for building up in spring. From these stocks there will be no possibility of any return until the sainfoin blooms. Even then it often happens that just as the plant is coming into flower one hears the rattle of the mower being drawn to the scene of operations.

"Resa."—I have no doubt this new remedy for bee-stings will be well tested during the next few weeks, and if proved effectual will be a great boon to many a timid bee-keeper. Personally, I take but the slightest notice of the pain, it is the subsequent swelling that I fear, especially if stung on the face. I shall not soon forget the first two stings I got near my eyes, as I had to lay in bed the next day, simply because I could not see. If Mr. Reid's remedy will allay such swellings as I suffer from, he has made a most valuable and timely discovery.—Arthur H. Homersham, *Sturry, near Canterbury, April* 28.

OUR FIRST RECORDED SWARM IN 1902.

[4762.] One of my hives sent out a splendid swarm to-day (April 24). Is not this extraordinarily early? Not having seen any mention of any swarms of 1902 in Bee Journal, I thought this may be of interest to your readers. [Yours is our first report.—Eds.]

I may also say I have three hives full of bees with supers on. Of course, we are surrounded here by acres of plum plantations, which are now in full blossom. This no doubt accounts for them being so forward.—H. E. Spiers, *Defford Station, Worcester, April* 24.

ROBBING IN SPRING.

[4763.] For some years the bees have wintered well, and in the month of March all have answered the roll-call. April or May has thrust a dark cloud over these promising prospects. Meantime there has been a continual warfare with "robber bees," and when the honey-flow opens the number of stocks has become sadly diminished. As this experience is not singular, it may be of service to suggest the cause and the cure. That March comes in like a lion and goes out like a lamb or *vice versâ* is as much now the rule as in our forefathers' days, so that beautiful sunny weather usually visits the land before April begins. Consequently the bees or the bee-masters seek to enlarge the brood-nest encouraged by the appearance of so many spring flowers. The succeeding wet washes away the nectar, or the frosty nights check its development. The too early promise of bee-weather has caused the production of many hungry larvæ, and for want of honey-flow the bees make onslaughts upon the stores of their neighbours, and robbing becomes rampant. The glass shutter, carbolic cloths, and such remedies do not obtain full confidence. Supplies of sweetened water placed at a distance from the hives go far to reduce the evil, possibly acting as an artificial honey-flow. If, however, the robbers are identified, the surest remedy is to carry the disturbance into their hive, by dividing them or by removing them to the position of the robbed. In districts where April and May are cold months, and the hoar frosts lie late on the ground, it is found beneficial to reduce the entrance of every hive to admit of only one or two bees at a time until the frost has said "Good bye." Less inducement seems in this way held out to rob, and the heat of the hive is maintained throughout the nights, an important point in hatching young bees, as well as chickens.—W. H. A. W., *Trefgarn, Pem., April* 25.

"NOVELTIES FOR 1902."

COVERS FOR HIVE-ROOFS.

[4764.] Referring to the letter in your issue of last week (4754, page 163), no doubt Mr. Newth will pardon my name appearing in connection with the roof-cover when he learns:—1. That the term "Novelty" was not applied by *me*. 2. I only started bee-keeping in September last, and had not heard of the B.B.J. till later. 3. The idea of a cover occurred to me by seeing the need of such in B.B.J., and having the necessary material and machinery for manipulation in my factory it did not require much invention on my part.

Mr. N.'s cover seems to be a simple piece of paper nailed on to the roof. The one I offer is put through a niche (without breaking), and shaped according to the roof. I hear that Mr. N. was a resident of Wallington, and should he return I shall esteem it an honour if he will accept a "cover" for practical test. In our neighbourhood they must be very securely fastened. Tar or other paint *must be used*. For quantities they are offered down to 6d. each, carriage paid.—T. Knight, *The Beeches, Carshalton, April* 2.

(*Correspondence continued on page* 176.)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

The Rev. S. Wild, whose bee-garden forms our "Homes" picture this week, is, we think, too modest when writing of himself in the following "notes" of his bee experiences. So he must pardon us for adding a line to say that he is one of those active local secretaries to the County Association who are "helpers" in more than name only. We say this on the authority of the County Secretary, Mr. Godson, who tells us that no would-be bee-keeper, be he a parishioner or a dweller outside the vicar's district, needs to ask for assistance in vain; practical help of the right kind being at once

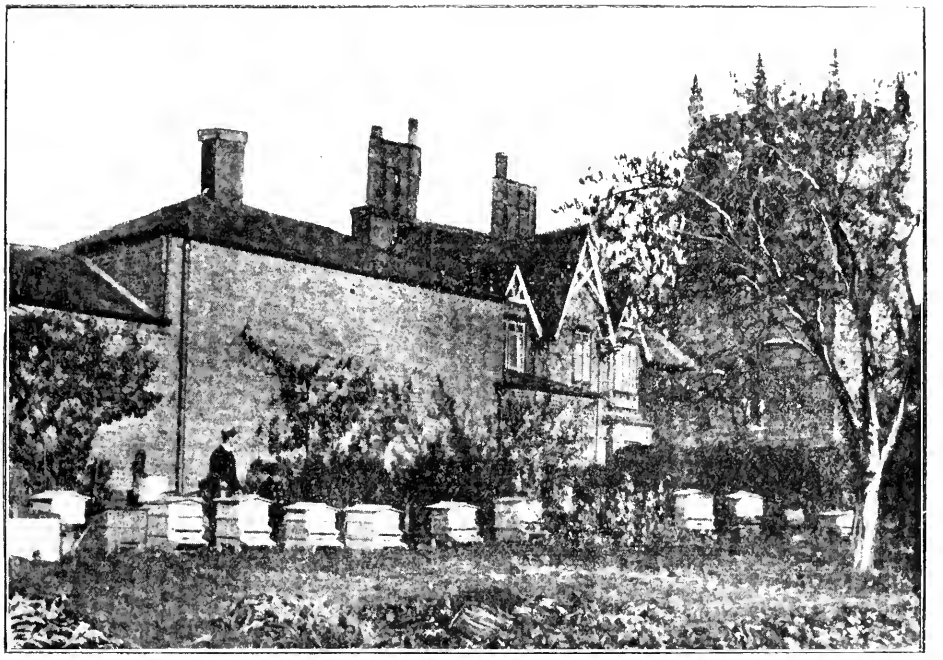
forthcoming. There are no more valuable friends of our industry than the local clergymen, and we need only add, would there were more of them. For the rest, the following "notes" speak for themselves :—

"Having been asked to give a short account of my bee-experiences for the 'Homes of the Honey-Bee,' I do so with pleasure. I have lived in the county for some ten years past, but not until the spring of 1898 was I converted to this delightful pursuit. Previous to this a friend of mine often tried to induce me to start bee-keeping, and supplied me with literature on the subject, but I took no interest in the matter until I chanced to attend a bee-lecture given under the auspices of the Lincolnshire B.K.A. The whole subject was then so clearly described, and the wonders of the hive so captivated me, that I determined to become a bee-keeper. It also occurred to me that in my capacity as vicar of a country parish I might be able to help my cottagers in the management of their bees, and I am thankful to say this has been the case. Not unfrequently in my rounds have I hived a swarm, but often I have had a pleasant chat on the subject of bees, and often given a word of advice.

"My experience as a beginner was far from pleasant, as I many times got most unmercifully stung, and suffered intense pain; but now that I can manipulate the bees better I am rarely stung, and in any case the sting has little or no effect. This remark may possibly give encouragement to some beginner who suffers in the same way; for I believe it to be a fact that in time the sting ceases to have any objectionable effect.

"I make my own hives; and here again I have derived much pleasure, for during the winter months one can pass some of the long evenings very profitably in making a hive ready for the coming season. All my hives are the 'W.B.C.' principle, as I consider them the best.

"Beginning with one stock of bees, which I purchased from a friend, in a good bar-frame hive, I have now ten stocks, and I am looking forward to a good season this year.



THE REV. SAMUEL WILD'S APIARY, DUNHOLME VICARAGE, LINCOLN.

"Of the profitableness of bee-keeping there can be no doubt, even when, as sometimes happens, one has a difficulty to dispose of one's honey. I never rush the market, but wait until there is a demand, and before the next honey-flow last year's produce is sold.

"I do not wish to weary your readers, and it will suffice to say that each year I have made a substantial profit, and at the same time derived intense pleasure, from watching and studying the habits of the 'busy bee.' Almost from the beginning I have acted as secretary for our local branch of the B.B.K.A., which is in a flourishing condition.

"May I also add that I always welcome the advent of your BEE JOURNAL, which contains much valuable help and advice."

CORRESPONDENCE.

(*Continued from page* 174.)

IRISH BEE-KEEPERS AND THE CORK EXHIBITION.

[4765.] At a meeting of the Cork bee-keepers, last week, a letter was read from the Hon. Secretary of the Irish Bee-keepers' Association stating that the Department of Agriculture, in addition to giving free space for bee products at the Cork Exhibition to the I.B.K. Association, will have a working apiary with daily lectures and demonstrations in bee-keeping during the continuance of the exhibition. The I.B.K. Association has undertaken, on behalf of, and under the auspices of, the Department of Agriculture to erect a "Monster Bee Skep" on the exhibition grounds, in which exhibits of all bee goods, flowers, and requisites will be staged. This mammoth straw skep will be 20 ft. in height, and lighted by electricity. It will be the biggest thing of its kind ever seen in Ireland. The Cork bee-keepers are heartily thankful to the Department for the very lively interest it is taking in pushing to the front this profitable and interesting branch of rural industry. The Department is sparing neither expense nor trouble in this direction.—W. T. McCarthy, *Caroline-street, Cork, April* 22.

HIVING VAGRANT BEES IN NATAL.

[4766.] The sigh was one of indecision. It was 95 deg. in the shade, and the Malvern road was shadeless. Should I go? Doubtless the bees would remain, but my courage to take them might not if I postponed going till a cooler day. The heat was intense, even for midsummer. The landscape lay in a shimmering heat haze, and the line of graceful syringas that fringed the roadway afforded no shade from the blazing sun. Here and there a white roof showed about the trees, but the road was deserted. With the exception of a string of Kaffir girls carrying calabashes and a group of Indians laden with pineapples on their way to the Durban market, I saw no one till I reached my friend's house at Malvern.

The bees had taken possession of the stable. They had built between the outside iron and the inside wood, and were going out and in at the stable door. None of the Kaffirs, it appeared, would go near them, not even Songololo, the stable boy. I had no sooner started operations, however, than he offered his assistance, procured a hammer and chisel, and set about removing the lining boards in quite a workmanlike fashion. The space behind the first two was empty, the removal of the third promised better; the next and the next and the next revealed one magnificent sheet of comb, hanging from the cross-beam just above our heads, down almost to the ground. It was a picture, but alas! we had no camera. The bees clustered thickly under the remaining boards—a soft brown velvet mass.

We worked for an hour cutting down the comb and securing the bees. It was 95 deg. in the shade, did I say? What the temperature was under that iron roof I had no means of knowing, but under a bee-veil, manipulating a smoker, it was very *hot*.

An "umfaan," carrying a small timepiece, appeared on the outskirts to say that tea was ready, and show me I must "chacha" (hurry), as it was nearly train time. No one else would venture near.

Songololo roped the boxes while I said "Good-bye." My friend remembered once having a swarm of bees in her wardrobe. She was younger then and less afraid. It was in the early days of the colony, when all the transport was by ox waggon. A memorable storm came, the rivers were swoollen, and the waggons could not cross. It was impossible to get stores from town. The neighbours shared with each other as long as things lasted—when the sugar was done they divided the honey in the wardrobe!

Songololo accompanied me to the station and stood on the platform fanning the boxes with a banana leaf against stray bees until the train arrived. I thought the other passengers looked somewhat nervous at first, but the journey was short and uneventful.

The day had been breathlessly hot and no cool breeze came with the night. It was so dark, too, I was forced to wait till the moon rose, before carrying my new friends to the hive I had set up for them on the slope. The way lay through a maize field and a patch of pine-apples. There is nothing more delightful than wandering out and in among the mealies in the sunshine, and as for pine-apples, when it is light, one can avoid the pricks. At night it is different! Pine-apple tops seem everywhere, and the mealie stems looked tall and ghostly in the moonlight. Their dry leaves rustled at the faintest touch. A lantern proved but a will-o'-the wisp and made the outlook, if possible, more bewildering. I stumbled hopefully over the shadows. Crickets whirred in the grass and fire-flies twinkled past. The cry of an owl made me start, then a big moth with dusky wings that in passing brushed my face. A grey frog jumped on a sheet of the honey-comb and winked at me in the moonlight; he greatly resented being told to "hamba" (go) and actually returned bringing a friend!

But fire-flies, crickets, moths, and frogs were of small account at present compared to the bees. After preparing the hive, I emptied them on a white sheet in front, according to the rules laid down in the text-books, and waited patiently till the last stranger was safely inside.

It was still cruelly hot. The house stood open, every door and window wide as though gasping for breath. The inmates lay about in deck chairs on the verandah and moaned.

There was no locking of doors, fixing of bolts or sash-fasteners that night, bees, bats, or burglars might come that liked; fear itself was lost in the longing for a breath of cooler air.

Next morning I set out early eager to see the bees in the new hive going happily out and in, more especially as this was my first attempt at hiving stray bees, and I had always regarded the undertaking as much more difficult.

Other friends had bees they were anxious to be rid of, and as I walked I set about planning how I might secure these additional swarms. The next consideration was where to locate them. There was the garden and the orchard, the land leading down to the river and the bushland beyond. It was easy to imagine the hives spreading down the valley, through the orchard and the mealie field, along the shady banks of the Umlaas. I could see all the land from the hill top on which the house stood, and bees were plentiful it seemed for miles around.

What about hives? There was the local carpenter, but colonial workmen received very high wages, hand-made hives would be expensive, still, he might be going ahead until machine-made ones came from Maritzburg or could be imported direct from England.

Of course, there were many difficulties to be foreseen, the gravest, that in such a lonely place, the coolies would steal the honey. Something might be devised to prevent them, strong metal clasps for instance or a chain and padlock. These could be wrought in quantity in Durban! And so as I picked my steps through the pineapple field each difficulty was met and answered.

There was the question of supering too, of tiering up for section honey. The local demand would for some time probably exceed the supply, section honey at present was rare, and if not, the surplus could very easily be exported. I had passed the pine-apples and was parting the mealies. By the time I came within sight of the hive, I had reached the subject of bee literature and the desirability of forming a Bee-keepers' Association in Natal! Here stood the hive, in all its snowy newness, that was to form the nucleus of this extensive apiary. I approached it cautiously. There was really no danger, but it is best to be careful. I stepped softly and avoided making any noise of a jarring nature, that might alarm the new tenants.

There was no need. As an angler silently draws in his line and slowly and silently rewinds his reel, when the fish he thought his disappears down stream, so I recalled that chain of hives, that stretched through the garden and the orchard right down to the shady banks of the Umlaas. In short, I lifted that hive-lid and *counted the bees*, one, two, three, four! It was true, they had gone—actually gone and left no address! I shall wait, I think, next time, till a cooler day.—MARY RITCHIE, *Trevose, Bellair, Natal, April* 3.

THE POETS' BEES.

No. 1.—SHAKESPEARE.

Collated by "F. E. I. S."

So work the honey-bees;
Creatures that, by a rule in Nature, teach
The act of order to a peopled kingdom.
They have a king, and officers of sorts:
Where some, like magistrates, correct at home;
Others, like merchants, venture trade abroad;
Others, like soldiers, armed in their stings,
Make boot upon the summer's velvet buds;
Which pillage they with merry march bring home
To the tent-royal of their emperor:
Who, busied in his majesty, surveys
The singing masons building roofs of gold;
The civil citizens kneading up the honey;
The poor mechanic porters crowding in
Their heavy burdens at his narrow gate.
The sad-ey'd justice, with his surly hum,
Delivering o'er to executors pale
The lazy, yawning drone.

* * *

Kill me a red-hipped humble bee on a thistle, and bring me the honey-bag. Have a care the honey-bag break not, I would be loath to have you overflown with honey.

* * *

The sweetest honey
Is loathsome in its own deliciousness,
And in the taste confounds the appetite.
Therefore love moderately.

* * *

I, of ladies most deject and wretched
That suck'd the honey of his music vows.

* * *

Thou shalt be pinch'd
As thick as honeycombs, each pinch more stinging
Than bees that made them.

* * *

Who, with thy saffron wings, upon my flowers
Diffusest honey-drops, refreshing showers.

* * *

Where the bee sucks there suck I,
In a cowslip's bell I lie.

* * *

Injurious wasps! to feed on such sweet honey,
And kill the bees, that yield it, with your stings.

* * *

The honey-bags steal from the humble-bees,
And for night tapers crop their waxen thighs.

* * *

So bees with smoke are from their hives driven away.

* * *

Drones suck not eagles' blood, but rob bee-hives.

* * *

Some say the bee stings: but I say 'tis the

bee's wax; for I did but seal once to a thing, and I was never mine own man since.

* * *

The king hath found matter against him,
That for ever mars the honey of his language.

* * *

When that the general is not like the hive
To whom the foragers shall all repair,
What honey is expected?

* * *

My Lord Pandarus: honey sweet lord!
Well, sweet queen, you are pleasant with me.

* * *

But for your words, they rob the Hybla bees,
And leave them honeyless.
Not stingless, too.

* * *

Good wax, thy leave. Bless'd be
You bees, that make these locks of counsel.

* * *

With words more sweet, and yet more dangerous
Than baits to fish, or honey stalks to sheep.

* * *

Be bold in us: we'll follow where thou lead'st,
Like sting bees in hottest summer's day,
Led by their master to the flower'd fields.

* * *

The fox, the ape, and the humble-bee
Were still at odds, being but three.

* * *

(Shylock) Drones hive not with me.

* * *

Since I nor wax nor honey can bring home,
I quickly were dissolved from my hive
To give some labourers room.

* * *

If I prove honey-mouthed let my tongue blister.

* * *

A most sweet girl—as the honey of Hybla.

* * *

They surfeited with honey, and began
To loathe the taste of sweetness.

* * *

'Tis seldom when the bee doth leave her comb
In the dead carrion.

* * *

Thus may we gather honey from the weed
And make a moral of the devil himself.

* * *

When like the bee, tolling from every flower
The virtuous sweets,
Our thighs packed with wax, our mouths with honey,
We bring it to the hive; and, like the bees,
Are murdered for our pains.

Queries and Replies.

[2832] *Drone-breeding and Using Foundation in Full Sheets.*—Being a beginner in bee-keeping, kindly through your valuable BEE JOURNAL, explain a point I am in doubt about:—I have made a hive holding nine "standard" frames. I propose filling them with full sheets of foundation (also wiring them). By doing so, will this interfere with the breeding of drones? A line of instruction on this point will oblige. I am a constant reader of your journal, and possess your "Guide Book," which is very comprehensive. —A. S., *Brechin, N.B., April* 23.

REPLY.—If you take the usual precaution of leaving a space about ½ in. between lower edge of sheet of foundation and the bottom bar of each frame it will allow of the bees building a few drone-cells in the vacuum left, if they desired to do so, so that no other precaution is needed.

[2833.] *Immature Drones Cast Out in April.*—I would feel greatly obliged for your advice *re* the following:—I have a stock of Italian bees (Sladen's strain). The nine frames are now all thick with bees, stores, and brood, in fact they are and have been for weeks working fully twenty times harder than any of my strongest blacks. This morning (April 23) I found the enclosed twenty drones dead outside the hive. 1. Can you tell me the cause of death? 2. What is meant by good ventilation in a bar-frame hive? I cannot see how you can have it without draught, and I know that should not be. 3. I am a member of a local Bee Association which is affiliated to the I.B.K.A., and see by your JOURNAL that the I.B.K.A. will not get affiliated to the B.B.K.A. Am I debarred from all the benefits of the new insurance scheme?—ITALIAN DRONE, *Bandon, co. Cork, April* 23.

REPLY.—1. The usual cause of immature drones—in various stages of development—being cast out at this season is either a sudden stoppage of income from natural sources or a scarcity of food in the hive. The same thing also happens at times from a sudden lowering of the temperature for several days in succession in each spring. You will be better able to judge regarding the probable cause of death than an outsider who has no knowledge of what the respective conditions are. We therefore advise inspection of the hive to make sure of there being plenty of food in the combs. 2. Good ventilation does not necessarily mean a through draught for the hive; in fact, we always advise plenty of warm coverings above the frames of brood nests in early spring. 3. By waiting till the scheme of insurance—now being formulated by the B.B.K.A.—is published in our pages (probably next week), you will find the terms for non-members of associations.

[2834.] *Utilising Half-filled Sections, and Giving Mouldy Combs.*—I have got several sections left over from last year only half-filled with honey, and would like to utilise them, so ask—1. Will there be any harm in putting them in the section-rack when the time comes for putting on the surplus? If I cannot do this, what use can I make of them? I have no extractor, and do not want to go to the expense of buying one. 2. When should the supers be put on? 3. I have a frame of comb (taken from the hive when contracting it for the winter) which has gone slightly mouldy through being placed in a damp cupboard. Will this be injurious to the bees if put back in the hive?—F. E. W., *Bromley, Kent, April* 23.

REPLY.—1. If the honey in sections has not granulated or started fermenting, they may be utilised as proposed; but we should only use one or two in each rack as "bait" sections for inducing the bees to take possession. 2. As soon as honey is obtainable outside, and the hive is fairly full of bees, *i.e.*, all frames fully covered except the outside ones. 3. If the mouldiness is only slight, as stated, the bees will soon clear it away, and no harm will follow its use.

[2835.] *Ventilating Hives to Prevent Swarming.*—It is often stated that in order to prevent swarming it is necessary to give ventilation in hives. With ordinary hives having no outer-cases it is easy enough, and the object is attained by raising the front of the hive, but with "W. B. C." hives I do not see that this is possible, as if the cases are raised the bees crowd between them and the body-boxes, and, similarly, the same thing happens if the body-box is raised. It seems, therefore, that in a "W. B. C." hive the only way to ventilate is by leaving the mouth of the hive open to the fnll extent. 1. Am I right in this? 2. With regard to the requeening of stocks, I presume a "second year's queen" is meant by one which is two *summers* old, not one which has lived two *years*?—AMATEUR, *Ingatestone, April* 23.

REPLY.—1. Your fear regarding bees crowding the space between outer-cases and body-boxes is more imaginary than real. In practice—with the hive referred to—we find it easy to give ample ventilation as follows:—Raise up the outer-case about ¾ in. from floor-board by placing a slip of wood *across* each corner. (This "raising-up" remains till the swarming season ends). Then with the point of a screwdriver prise up the body-box in rear and insert a wedge ¼ in. thick. This allows a free current of air right through the hive, while bees pass out freely in the rear when working. In very hot weather we raise the body-box on all four sides and give free exit for the bees all round. This keeps the very strongest stocks from becoming overheated. 2. Yes.

[2836.] *Disinfecting Hives.*—When disinfecting hives which have had in them bees infected with foul brood, you advise, I believe, to "scorch the hives with a painter's lamp," I, therefore, ask: 1. Is a mere application of the flame sufficient, or must the wood be slightly charred all over? 2. Must hives be so treated inside and out? 3. I painted the insides of some of my hives last year with a thin preparation of tar—tar-varnish, I think, it was called. Must this be burnt off, for it boils under the flame, and does not seem affected in the same way as paint? 4. Would washing such hives with a strong solution of carbolic acid (Calvert's No. 5) be effective as a thorough disinfectant?—K. O. MACLEOD, *Shandon, N.B., April* 26.

REPLY.—In applying the flame of lamp referred to, it needs but to know what it is intended to accomplish—viz., burn up the *spores* of foul brood. "Scorching" the wood fully secures this end, and the intelligence of the user does the rest. 2. No, we may trust to paint for the outside of hives. 3. We think not. 4. It is because of the distinct statement—made so often in our pages and emphasised in the "Guide Book"—that no disinfectant has any effect on the *spores* of foul brood that burning is recommended.

[2837.] *Transferring Bees to Clean Hives.*—A friend of mine bought a bar-frame hive of bees at a sale, and on examining them last week he found bees and combs in a very filthy state. He therefore wants me to transfer the bees into a clean hive with full sheets of foundation only. 1. Can this be done with safety? 2. Must any of old comb be put into clean hive? 3. Will it be necessary to feed the bees? 4. Which is the best method of transferring them?—H. J. PANNELL, *Sayer-de-la-Haye, April* 14.

REPLY.—We can best reply to all four of your queries by advising the purchase of a "Guide Book," in which will be found full details of a method by which bees will transfer themselves from any unsuitable hive into a clean one. You cannot hope to make a successful first attempt at an operation of this kind without fuller details than we can give in our Query column.

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close May 17.**

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed,** unless with late fee.

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle

and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** Referring to our reply to J. B. Hamilton (on page 170), our correspondent "Ebor" (4742, page 144) writes that he has no objection to his name and address appearing. We, therefore, print it here :—L. Hill, Two Gates Farm, Oldfield, Altrincham.

C. R. (Malling, Kent). — *Queens Laying Several Eggs in a Cell.*—1. When so many as two, three, or four eggs are found in single cells it is a sign of something being radically wrong with the queen-bee, which is probably old and failing. 2. In your case the fact of nothing but drone-brood being reared in the other hive mentioned shows that the queen is worthless, and the obvious inference is that the stock is of no value at all. 3. The hon. secretary of the Kent and Sussex B.K.A. is Mr. H. W. Brice, 100, Brigstock-road, Thornton Heath.

W. C. H. (S. Devon).—*Using Old Comb-foundation.*—If, as stated, the foundation "looks all right," even though three or four years old, it can be made quite fit for present use by warming to render it pliable. Some bee-keepers dip old foundation in warm water before using, and so remove the brittleness, and prevent its cracking when fixing in frames.

E. K. H. (Brondesbury-park, N.W.).—*Starting Bee-keeping.*—The present is a most favourable time to make a start. Full information with regard to dealers who will supply you with bees and appliances will be found in our advertisement pages. The hon. secretary of the Middlesex B.K.A. is Major Fair, 11, Anlaby-road, Teddington, and you would no doubt get such expert help as is needed by applying to that gentleman, and joining the association.

J. B. Williams (Gelli Lydan).—*Transferring Frames of Brood to a Distance.*—The only way of doing this with safety is to wrap the comb of brood in several thicknesses of flannel (warmed), and take every precaution to keep it warm on the journey. Care must also be taken not to bruise or damage the cappings or the comb in any way.

G. E. K. (North Wales).—*Bees Building Comb and Breeding in Candy Boxes.*—1. It is common to find bees building comb in the vacuum left after candy has been consumed, but we very rarely hear of the queen depositing eggs therein. It is an interesting case, and we should like to hear if others have had a similar experience. 2. We recommend queen excluders to be used always below boxes of shallow-combs. 3. Syrup food given in spring should be much thinner than that for autumn use.

J. E. Short (West Norwood).—*The B.B.K.A. Apiary at Swanley.*—It is usual to make an appointment beforehand with Mr. Herrod, the apiarist at Swanley College, before visiting the apiary. This is necessary because only the official expert of the B.B.K.A. has authority to open the hives there.

J. R. Talbot (Romford).—*The Horse Chestnut as Bee Forage.*—This tree is useful to bees as a supply of food, but the honey gathered from it is too poor in quality for table use.

J. Valentine (Collooney).—It is quite safe to use any "weed killer" made from carbolic acid about hives.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F. B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

"Wing" (Alfreton, Derbyshire). — Brood entirely dried up, no sign of larvæ left. The cell-cappings, however, indicate plainly a bad case of foul brood.

M. P. (Devon).—Fortunately, there is no cause for alarm in a couple of cells having perforated cappings. They are not "perforated" in your case, but have never been completed. The dead brood in comb is "chilled" only, no doubt through shrinkage of the cluster of bees, owing to a lowered temperature and consequent exposure to cold.

T. W. (Colchester).—There is foul brood in comb, but yours is not at all a bad case. We only found two cells in which there was any disease. Regarding the queen "flying about your garden" recently, the fact of only fifty bees being found in the hive when examined shows plainly that the stock is worthless, and, the condition being altogether abnormal, the queen left the hive on this account. The small patch of worker brood found shows that but for the sparseness of bees breeding would have gone on all right.

W. G. H. (Wolverhampton).—No disease in comb. The dead queen received is an adult, and was probably aged and worn out. The weak lot of bees left in hive—if worth saving—may be added to the next hive; but, being all old, they are of little or no value.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' INSURANCE SCHEME.

We are now enabled to place before our readers the form of receipt to be given to each insurer under the scheme formulated by the British Bee-keepers' Association, on the terms of a policy issued, as stated below, by underwriters at Lloyd's.

It is desirable that bee-keepers taking advantage of the scheme will carefully read the form of receipt which follows—and also the "other conditions" enumerated, 1 to 6—in order that no misunderstanding may arise with regard to the liability of the several parties concerned.

Copies of this receipt will be in the hands of the various County Association Secretaries within the next few days, and these gentlemen will then be authorised to accept premiums and to issue guarantees.

Received of....., of....., in the county of....., the sum of £..... ...s.....d., being a premium at the rate of 1d. per hive on the maximum number of hives* kept in his apiary at..... (minimum premium, 6d.; and for non-members of British Bee-keepers' Association or of affiliated associations, 6d. additional). In consideration of this premium the British Bee-keepers' Association have caused the said .....to be insured under a policy issued by underwriters at Lloyd's, dated..... .....against all liability to third parties for damage to persons or property occasioned by bees from the above-mentioned apiary outside the apiary, such claims in any one year not to exceed the sum of £30 (thirty pounds) in the aggregate, and not to include any claim for injury to the assured or persons or live stock under his control.

This guarantee covers the period from August 1, 190 (noon, to August 1, 190 (noon).

Dated.....190 .

Hon. Sec. of B.B.K.A.

* The number of hives now kept is .....

(For other conditions see below.)

1. The minimum premium is 6d. Persons not being members of the British Bee-keepers' Association or any association affiliated thereto may insure on payment of an additional fee of 6d. per annum.

2. All premiums must be paid to the Secretary of the B.B.K.A., or the Secretary of the County Association affiliated thereto, before June 24 in each year.

3. The policy will not come into force with regard to any intending insurer until his or her premium has been received and accepted by the B.B.K.A.

4. If the assured shall increase the number of hives kept beyond the number covered by the premium paid, the assured will only recover such proportion of the amount of any claim as the number of hives paid for bears to the number of hives in the apiary at the date of the injury being sustained.

5. It is a condition precedent to any claim under this guarantee that in the event of injury caused by bees from the above-mentioned apiary, notice thereof shall have been given by the assured in writing to the B.B.K.A., at its office, 12, Hanover-square, London, within seven days from the date of such injury, together with full particulars of the nature of such injury and its causes, and further that no liability to third parties shall be admitted by the assured without the written consent of the B.B.K.A.

6. Definition.—By "apiary" is understood that portion of ground set apart for the accommodation of the bee-hives.

INTERNATIONAL EXHIBITION OF BEE-KEEPING AT VIENNA IN 1903.

In compliance with a request, signed by the President and Secretary of the Austrian Bee-keepers' Association, we have pleasure in publishing the official notice of next year's International Exhibition at Vienna as under:—

"DEAR SIRS,—We beg to send you herewith a preliminary notice regarding the International exhibition in bee-keeping at Vienna, 1903, for insertion in your esteemed Journal:—

"An International exhibition of bees, hives, appliances, honey and bee literature, arranged by the Central Association of Austrian Bee-keepers, will be held at Vienna during the festival of Easter, 1903. Full information and all particulars regarding exhibits, &c., may be had on application to the Centralverein für Bienenzucht in Oesterreich, Vienna, Austria, I. Schauflergasse, No. 6."

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4767.] The merrie month of May is with us again, and our bees are improving every shining hour, or parts thereof, in spite of the sudden storms which overclouds the sunshine

and sends them hurrying home pell-mell for their very lives. The breadth of bee-forage is enlarging every day, old "leys" being yellow with dandelion, and the hedges white with blossom of the thorn. The hawthorn in the hedgerows will soon be opening its flowers, along with the sycamores and horse-chestnuts, each offering their wealth of blossom to the busy bees. All these things point to a good time (from the early forage) for our myriads of workers, while the splendid growth of sainfoin promises a good harvest if we are favoured with good weather in which to gather it in.

The mixed grass crops to be counted on in my locality are mostly hop and rye ; the dry season last summer having prevented free germination of the white clover seed, consequently unless the small amount of plant-growth which survived the drought wonderfully increases we shall not have a large breadth of white clover for bee-forage in our district. Trifolium, however, is looking well, as are also the vetches, and the hybrid alsike clover give promise of a good harvest.

Our district, as a whole, is high and dry, Beedon Hill being one of the highest points above sea-level in Berkshire ; so that our situation is a bleak one, and, in consequence, a rather late district for swarming compared with the sheltered glens and valleys in fruit districts.

Referring to the question of waterproof hive-covers, now rather prominent in B.B.J. pages, I should think it must be nearly twenty years since the Rev. W. E. Burkitt exhibited (I believe he exhibited them) cheap home-made frame-hives suitable for the cottager, with roof-covers of "Willesden Paper." It makes one ask, "Is there anything new under the sun?"

Unsealed Sections.—I have no wish to usurp the place of our esteemed Editor in replying to Query 2834 (page 119), but if he will bruise the capping of any sealed cells in the sections, then place them flat over the feed-hole of quilt, the bees will clear them out, even if crystallised. A day or two later turn the sections over ; lay a square of glass over them, so that the bees can move freely over the face of the comb ; then when cleaned out (as only bees can do it) these sections can be taken away, and will be useful to place in centre of your first section-rack, when supering, to induce the bees to take possession. New combs mean renewal of the brood-nest ; more bees, and, consequently, more honey—this month and next are the best for their production. When doing spring cleaning, mark the old clogged, black, crooked combs, and place same on the outside of the brood-nest, or if you use combination hives you will now appreciate the elasticity of the brood-nest by the movable dummy. These undesirable combs can be brought to the rear, any cells of honey opened, and the sheet of foundation placed in the centre of brood-nest when weather is warm and honey is coming in. A few hours later the sheet of foundation will become a new comb, and if queen is prolific, it will be filled with eggs. From two to four new combs built every year in this way will keep brood-nests in the best of condition for securing strong colonies. It also acts as a combatant of disease, seeing that weak colonies most readily fall a victim to foul brood. If one-half or three-quarter sheet is given you will raise some fine drones in natural built cells.

Wasps.—Queen wasps often pass the nights early in May as "casuals" in the roofs of hives. I have already killed several this season, and we should bear in mind that every one destroyed now prevents a nest later on. Wax-moths should also engage the attention of every bee-keeper. If these pests exist about the apiary do not let one escape ; they are in the warm quilts or wraps over the brood-nest, and the larvæ in the saw-cuts at top of frames. A nail point or bradawl will soon make short work of these destructive creatures in these crevices. Weak colonies should be united to others. They rarely pay for time and trouble of trying to build them up, because often when they recover and build up into fair colonies it is too late for present season's work, except in heather districts. Get your bees into good condition ready for your harvest ; the time of flowering of the principal source of nectar varies in different districts and latitudes. Colonies require to be full to overflowing with bees of the right age for field work and the combs full of brood ready to hatch. This condition will force the bees into the supers, and when they have made a good start all they require is room just in front of their requirements. These are the stocks which bring up the totals and break the records. Our A. B. C. class of section-glazing must now close till after the busy season. We have sent out a large number, which I hope may act as an incentive and pattern to those who wish to succeed as bee-keepers.—W. WOODLEY, *Beedon, Newbury.*

BEES IN OXFORDSHIRE.

A WEEK'S NOTES FROM MY DIARY.

[4768.] The past week was a very trying one to the bees, so cold and stormy has been the weather. Sunday, April 27.—A rough north-east wind blowing all day, though the sun shone brightly ; this tempted the bees out, and in consequence many got chilled and lost, especially where they had to cross a bleak highway to get back home. Monday.—Very cold and windy in the morning, but much warmer in the afternoon, and the bees, taking advantage of the better conditions, worked for all they were worth. Tuesday.—Very similar to Monday—cold in the morning, then warmer about midday ; the wind, however, was calmer, giving the bees a better chance of

working. I saw the first apple blossom to-day. The trees look very promising this year, all fruit trees being laden with bloom. The plums, pears, gooseberry, and currant are all in full "working order," and the blackthorn is one mass of white. With suitable weather the bees would come along and get strong ready for the main honey flow, which with us is sainfoin and white clover. Wednesday.—Still rough, but I saw the bees working on willow palm for the first time to-day; but the blossoms were blown and tossed about so that the bees could hardly find a footing. Thursday.—Weather calmer, but still trying to the bees; saw them working the beech to-day. I never knew till last year that the beech was of any service to them, when I noticed them working on it for the first time. Friday.—Stormy most part of the day, high winds prevailing in gusts every hour or two, which all bee-keepers know is very destructive to bee life. Saturday.—The bees had no chance of work at all. We had a thunderstorm about 10 a.m., and then a gleam of sunshine, followed about 11 by a terrific downpour of hail and rain, which must have meant death to thousands of bees that had ventured out.

We may sum the past week up as being of little use to the bees or bee-keepers in my district; in fact, I believe that with us the brood-chambers will be contracted more at the end than it was at the beginning of the week, which all bee-keepers know is not getting forward very fast. Trusting we shall have better weather in the coming week.—E. T. EDEN, *Chadlington, Oxon, May* 5.

BEE-STINGS AND IMMUNITY FROM INFECTIOUS DISEASES.

[4769.] As a reader of your valuable journal for the last fourteen or fifteen years, I have often thought that had I been able to write I should like to say a few words in your columns, but you will see at once that I was not born in the times of compulsory education, yet none the less do I feel that I ought to give my experience with regard to bee-stings and immunity from infectious diseases. I have been caretaker of a hospital since 1884, so if I live till June 27 next shall have completed eighteen years' service, during which time I have had to deal with every form of infectious disease, except cholera. I have had to work about patients suffering from typhoid, typhus, enteric, and scarlet fevers, besides cases of smallpox and many other minor diseases, and in this way I generally undertake the most dangerous part of the work with regard to male patients, in severe cases attending to them myself. I also do all the disinfection and burning of the clothes worn when brought into the hospital, and a lot of similar work when they leave. My present wife has laboured for ten years at work of the same kind and never contracted any disease except once when she took diphtheria through examining a patient's throat. But you may say, what has all this to do with bee-keeping, bee-stings, and infectious diseases?

Well, my bee-keeping dates from 1885, when my first wife bought a skep for 6s. Now I possess nine bar-frame hives, and try to make the best I can of them; and with regard to immunity from infection through the help of bee-stings, we may take what credit we like to the bees, but there is no doubt that Divine protection has something to do with it. But at the same time I think there may be something in the bee-sting theory, and that is why I have given my rather exceptional experience in hospital work. There may be something in the nature of an antidote in the poison of the bee's sting, of which but little is so far known. There can in any case be no harm in getting information from B.B.J. readers like myself, who have been more or less in contact with infectious diseases. I can only say that during the time I have been a bee-keeper I have had my full share of stings, though they do not affect me at all now.

I send you my name and that of the hospital where I am engaged for reference in case of need, while signing myself—A CUMBERLAND BEE-KEEPER.

EARLY SWARMING IN 1902.

[4770.] As an instance of early swarming, it may interest your readers to learn that a very fair-sized swarm issued from one of my hives on the afternoon of April 30.

This stock was supered on the 23rd of that month with a rack of sections, the weather being then very mild and honey coming in fast from the cherry-bloom, we being situated in the centre of one of the largest fruit-growing districts in Kent.

I was preparing to give room below the brood-nest to this particular stock, but the weather two days after supering unfortunately turned very cold, with easterly winds, which delayed my doing so. It surprised me, however, on hearing that the bees had swarmed, for at the time of supering I gave them, in addition to the sections, an empty frame, fitted with full sheet of foundation in the centre of brood-nest.

All my eleven stocks are well forward this year, a condition which I put down to the mild spring and to slow feeding since about the latter part of March. I hope, if weather continues favourable, to get all stocks supered in a day or two in time to get some finished sections from the cherry and apple bloom.

I hope all apiaries in this district are likewise well up to time, in which case we only need a continuance of fine weather (but not without a few warm showers) to anticipate a record honey crop for the Coronation year.—W. F. LOWE, *Borden, Sittingbourne, May* 1.

EARLY SWARMS.

[4771.] I notice in last week's B.B.J. (4762) H. E. Spiers reports that he had a swarm on April 24. I made an artificial swarm myself on the same date, and the young queen took her first parade on the 26th and became chief ruler of the household. Both hives are doing all right; we shall now be hearing of plenty of swarms from all parts.—J. S. LAUTON, *Oldbury Wells, Bridgnorth, May* 5.

BEES BREEDING IN CANDY-BOXES.

[4772.] In reply to "G. E. K." (North Wales) in B.B.J. of May 1, page 180, you say you would like to hear of cases of the queen laying in the empty unremoved candy-boxes. I have had such an experience three days ago in this village. I was supering a hive for a policeman, and in the candy-box I found drone-comb had been built, and was peopled with full-grown larvæ.—W. H. HARRIS, *The Shrubbery, Hayes End, Uxbridge, May* 2.

[4773.] In your "Notices to Correspondents" column of May 1, page 180, I notice reply to "G. E. K." it is said you should like to hear from others who had had a similar experience with regard to queen laying in comb built in the vacuum left after candy has been consumed. I enclose you a comb taken from the empty candy box from my only hive on Sunday, April 20, in which you will see the queen had laid eggs in nearly every cell of a piece of comb built in the box. I had looked at the bees a week earlier, when there was a fair quantity of candy, but on going to the hive on the 20th, I found a lot of yellowish stuff on the alighting-board, which I could not understand. On opening the hive I found the candy all consumed, and the bees had partially destroyed the cardboard box into which it (the candy) had been run, and the yellowish substance turned out to be the fibrous part of the box, which had fallen between the frames and been cleared out. The bees appear to have used some of this in building the comb, as you will notice some of the material is worked up with the wax. Trusting this may be of interest to readers.—C. S. WILDBLOOD, *Gravelly Hill, Birmingham, May* 5.

SIZE OF HIVES AND NOVELTIES.

"NOTHING NEW UNDER THE SUN."

[4774.] I would be very loth to make any change in the size of the Standard frame, now so universally used, and of the hive that suits it, even where one appears to get a greater surplus from another sized hive; but some enthusiast who may have more time for experimenting than I have may wish to try, and as you say you have no objection to have the matter discussed, I give you my experience of a non-Standard frame. In my "Year's Report" in B.B.J. of December 1, 1884, I stated that I had one hive 16½ in. long by 14 in. wide by 11½ in. deep. The length, however, does not signify, because some of it is empty behind the division-board, as I only use eight frames in it. These are kept apart by nails, as distance pegs, between which the bees came up and propolised the ends of the frames to the outside board of the hive side—the walls being double—but some of the frames are something more than the regulation distance apart; and whether it is this, or the size of the hives, or what, that seems to increase the surplus I cannot tell. I have the same breed of bees in the other hives, but, though these frames have not been disturbed since 1882, this hive has always, except two years, given more surplus than any of my others. In 1897 it gave 82 lb. as against 42 lb. and 18 lb. respectively of two others; in 1899 it gave 90 lb. as against 69 lb. from the next largest yield; in 1900, 56 lb. as against 39 lb. from another; but in 1901 it only gave 41 lb. as against 44 lb., 31 lb., and 24 lb. of three others.

In B.B.J. of March 27 (page 123) Mr. Knight said he designed a cardboard cover for hives.

In B.B.J. of April 17 there is a description of one, and Mr. Newth, on April 24 (4754), says he has had them in use for over two years, made of Willesden paper tacked on a light frame.

It may be interesting to bee-keepers to know that the Willesden cardboard is even more lasting than Mr. Newth is aware of, and that his design has been in use a good many years and is a success.

In September, 1885, I covered two wooden hive-roofs that were leaking with "Willesden paper" (four-ply), and in 1886 I made a cover of the same material on a frame, as described in B.B.J. of 17th inst., tacked on a light frame, as described by Mr. Newth. These three covers are still in use and in good condition, having cost nothing since except an occasional coat of paint, which is advisable, though perhaps not required.

In bending the cardboard sharply it should first be soaked a short time in hot water.—BOZ, *Co. Cork, April* 30.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

L'Apiculteur (*France*).—Several superstitious customs still prevail in the department of Saone et Loire. Such as putting a piece of crape on the hives on the death of one of the family of the owner, making a deafening noise with pots and pans at the exit of a swarm.

In hiving a swarm sticks of hazel are placed across the basket hives, no other wood will do, and the inside of the hives is often rubbed with hazel leaves. Many bee-keepers in this district transfer their hives from less favoured localities to parts of the country where buckwheat is cultivated during the flowering period of that plant.

L'Apiculteur.—Dr. H. V. Thering — the careful observer of the social bees of Brazil—has discovered a biological fact of great interest. A species of Melipone (*Irigona helleri*), lives in Symbiosis in the nests of certain termites. The Indian name of this species is Cupira (a contraction of "ira," honey and bee, and "cupini," termite), which shows that the natives had noticed this singular symbiosis before it was remarked by zoologists. Further particulars are at present unknown.

Bulletin de la Société d'Apiculteur en Tunisie.—The native bee of Tunis is the most suited to withstand the sudden changes of temperature, the great heats, and violent winds, and still more the very primitive treatment she receives in the greater number of hives, European or native. 1. She is accused of being aggressive. 2. Too much given to swarming. 3. Slow in constructing new combs and in the secretion of wax. 4. She is smaller than the European bee, and therefore naturally brings in less. Now for her defence. If she is irascible, the fault is usually in the management and want of needful coolness. The natives, who have hundreds of hives, cut out the combs at will without being stung. Eighty strong stocks are kept in a small yard surrounded by habitations, and they can be visited and manipulated without any precautions but a veil. Even the Italian bee is not more gentle. 2. Larger hives and a system of movable frames will reduce the danger of swarming, which only shows it to be a vigorous and prolific race. 3. Our bees, if apt to swarm, can also construct swiftly the needful combs. 4. The bees reared by the natives are truly very small, on account of their using the same comb again and again in the rearing of the brood, but under proper management they increase in size. Foul-brood in mild form exists everywhere in the native apiaries; but the Tunisian bee can be cured of it. She flies abroad at the earliest dawn of morning, and in the hottest sun or even in a violent tirocco she may still be seen working on.

TEXT BOOKS AND BEE JOURNALS.

I have always been a poor hand at paying compliments to any one, but I must compliment the editor on his advice to beginners, where he recommends getting a text book, and letting the bee-paper go, if the reader cannot afford both. This unselfish advice is certainly sound. Too many people go into a business without learning how to manage it, and thereby make a failure. A Chicago man some two years ago bought a large farm in our vicinity, and settled upon it with the intention, as he said to me, to "play at farming" a while. This playing proved an expensive venture. Two bad seasons in succession, joined to absolute lack of knowledge of the management of a large farm, have so thoroughly disgusted him with the "play" that he is seeking a purchaser at a much less price than the original cost, and will probably have to make a sacrifice.

It would be about the same with a man who makes a start in bee-culture without some knowledge of the habits of the bee. He must know how to distinguish workers from queens and from drones; how to rear queens; how to ascertain how much food the colony must have to winter on; or to reach the crop if winter is over. If feeding is necessary, he must know how to do it properly; how to prevent robbing, and stop it if it begins. He must be informed that the appearance of the first blossoms is not indicative of a constant supply of honey for his bees.

In this connection, I will cite the instance of a man who had purchased half a dozen colonies of bees in spring, and had brought them home during fruit-bloom. He had seen our success with bees, and had concluded that all he had to do was to buy a few "for a start," and that they would go on increasing without his having to attend to them in any other way than taking away their surplus honey. As a matter of course, he expected to ask us for a little advice once in a while.

He brought his bees home, as I said, while the apple trees were in bloom, and came to me to tell how strong the colonies were, and wanted to know whether he had not best put on the supers. I went over to his yard, and we examined the colonies together. The weather was rainy and rather chilly, and the bees were getting nothing from the fruit bloom; they were also rather short of stores. So I told him that he had better keep the supers off for a while yet, as the bees would probably need feeding before clover bloomed. This thoroughly disgusted him with my advice. "What! Feed them when there are blossoms all round?" It probably looked very suspicious to him, for he asked no more questions, and did not feed, the result being that he lost a portion of them, and the remainder reached the clover crop in poor condition. But there is no end of things needed to be known in bee-culture that cannot be learned unless it be through a protracted experience, or through a book.

But the book is not alone needed; and here, Mr. Editor, I think you might have said something a little more pointed as to the necessity and usefulness of a good bee paper. The text books give the digested knowledge acquired by the leading bee-keepers and scientists of the world; they give it in a form that is at once exhaustive and elementary, because they not only explain details, but give

reasons for all advice. But a text book cannot follow progress except through repeated revisions, and these revisions are only made from time to time, while the weekly or monthly publication keeps us posted on the present improvements. These improvements are of all kinds, both in the domain of scientific discoveries and mechanical appliances. Without the magazine that reports these improvements we are bound to get belated in the race for progress, and it is not only local improvement that we want, but a general information of what is going on the world over. Those who do not read find themselves distanced within a few years.

I never was so much struck with the idea of what steady progress meant as when Father Langstroth visited us after having retired from the bee business for some fifteen years. It seemed to me as if we had been following his teachings almost to the letter, and that we could hardly show him anything in the bee-line that he had not already seen; yet, after witnessing our extracting crew at work for a few hours, he said: "It is of no use for one to think that he can, after fifteen years of absence, find an industry just as he left it, for he is sure to be *away behind.*"

And so, if we read a text book, we will get knowledge acquired at the date when the text book was printed; but if we do not take a bee paper we are sure, after a few years, to find ourselves "away behind."

Yet practical bee-keepers are very careful not to accept new theories or new implements, or new methods, until they have been thoroughly tested, and it is well to warn the beginner against taking hold of any new thing which he has not seen recommended in the text books, unless it has been previously tested on a sufficient scale to make it reasonably sure of success. Many and many an implement or a new method has been lauded to the skies, to be found afterwards only an imposition, usually introduced in good faith by some self-deluded individual.—C. P. DADANT, in *American Bee Journal.*

THE POETS' BEES.

Collated by "F. E. I. S."

No. 2.—THOMSON.

Nor is the mead unworthy of thy foot,
Full of fresh verdure and unnumber'd flowers.
Here their delicious task the fervent bees,
In swarming millions tend: around, athwart,
Thro' the sweet air, the busy nations fly,
Cling to the bud, and, with inverted tube,
Sucks its pure essence, its ethereal soul;
And oft, with bolder wing, they soaring dare
The purple heath, or where the wild thyme grows,
And yellow load them with the luscious spoil.

* * *

Thou like the harmless bee may'st freely range,
From mead to mead bright with exalted flowers,
From jasmine grove to grove, may'st wander gay
Thro' palmy shades and aromatic woods.
And see where robb'd and murder'd in that pit
Lies the still heaving hive! at evening snatch'd
Beneath the cloud of guilt-concealing night,
And fixed o'er sulphur; while not dreaming ill,
The happy people in their waxen cells,
Sat tending public cares, and planning schemes
Of temperance for winter poor; rejoiced
To mark, full flowing round, their copious stores.
Sudden the dark oppressive steam ascends;
And used to milder scents, the tender race,
By thousands, tumble from their honey'd domes,
Convolv'd, and agonising in the dust.
And was it then for this you roam'd the Spring
Intent from flower to flower? for this you toil'd
Ceaseless the burning Summer-heats away?
For this in Autumn search'd the blooming waste,
Nor lost one sunny gleam? for this sad fate?
O man! tyrannic lord! how long, how long,
Must you destroy? Of their ambrosial food
Can you not borrow; and in just return,
Afford them shelter from the wintry winds;
Or as the sharp year pinches, with their own
Again regale them on some smiling day?

* * *

By flowering umbrage shaded; where the bee
Strays diligent, and with the extracted balm
Of fragrant woodbine loads its little thigh.

No. 3.—HOOD.

And lo! upon my fixed delighted ken
Appeared the loyal Fays—some by degrees
Crept from the primrose buds that opened then,
And some from bell-shaped blossoms like the bees.

* * *

They made soft music at each little stir,
But something louder than a bee's demur
Before he lights upon a bunch of broom.

* * *

The squirrel gloats on his accomplished hoard,
The ants have brimmed their garners with ripe grain,
And honey bees have stored
The sweets of summer in their luscious cells.

* * *

On honey I could feast like any fly.

* * *

But he will sip it first—before the lees.
'Tis his to taste rich honey, ere the bees
Are busy with the brooms.

* * *

Jasmine is sweet, and has many loves,
And the broom 's betrothed to the bee.

WEATHER REPORT.

WESTBOURNE, SUSSEX.
April, 1902.

Rainfall, 1·12 in.
Heaviest fall, ·28 in., on 21st.
Rain fell on 12 days.
Below average, ·54 in.
Maximum Temperature, 61°, on 25th.
Minimum Temperature, 28°, on 7th.
Minimum on Grass, 15°, on 7th.
Frosty Nights, 4.
Sunshine, 197·8 hours.
Brightest Day, 28th, 13·3 hours.
Sunless Days, 3.
Below average, 4·4 hours.
Mean Maximum, 52·2°.
Mean Minimum, 38·3°.
Mean Temperature, 45·2°.
Below average, ·9°.
Maximum Barometer, 30·41°, on 7th.
Minimum Barometer, 29 65°, on 22nd.

L. B. BIRKETT.

CONVERSATIONS WITH DOOLITTLE.

PRIME SWARMS.

"Good morning, Mr. Doolittle. I am interested in the swarming of bees, and feel that I know very little about the principle on which swarming is conducted, so I came over to have a little chat with you regarding the matter."

"All right, Mr. Brown. But what started you off on this swarming matter now? Bees are not likely to swarm here in Central New York to any amount under nearly three months."

"Yes, I know that is so, but I have been looking over my back volumes of *Gleanings* during the stormy days which we have had along back, when I came across this in Dr. Miller's Stray Straws, page 511 for July 1, 1895: 'A prime swarm,' says Doolittle, page 484, 'is often erroneously called a first swarm. Why erroneously?' I copied it off so that I could ask you if you ever answered that question."

"I do not remember whether I ever did or not; but I think it can be answered satisfactorily."

"But I always thought a prime swarm was a first swarm, and all of those coming later on from this same parent colony were after-swarms."

"You are correct in thinking that a prime swarm is a first swarm, for such is always the case; but that is not the question Dr. Miller raised, if I understand him correctly."

"Well, then, I do not understand Dr. Miller as well as I thought I did. What do you understand to be the question he raises?"

"He wishes to know why it is erroneous to call a *first* swarm a prime swarm. A prime swarm must of necessity be a first swarm, but that does not necessarily make it that a first swarm must be a *prime* swarm."

"Well, what is the difference?"

"I think we can get at this matter by turning to the dictionary. Here it is. 'Prime, n. 1. . . . 2. The period of full perfection in anything.'"

"Very well. Is not the first swarm a perfect swarm?"

"No, not always."

"Please tell me wherein not."

"A first swarm, to be a prime swarm, must be in a normal or perfect condition, which is as follows: The parent colony must have an old or laying queen, generally reared the season before, or of longer standing, though this is not strictly necessary with a prime swarm. But it *is* necessary that this queen should have been laying long enough to fill the hive with brood, laid the eggs in the drone and queen cells, while the younger bees are all of her own production. Then, upon the sealing of the first queen-cell (in some cases before), this old or laying queen goes out with the bees when they swarm, so that they can establish a perfect colony in their new home at once. Here we have not only a first swarm, but a prime swarm as well, because in every way the whole thing is in accord with perfect or *normal* condition."

"But I never knew a first swarm to issue under any other conditions. Did you?"

"Oh, yes. Very many of them. And this is especially the case in very poor seasons. Two years ago I had only three swarms in both apiaries, and none of the three were prime swarms—that is, swarms like what we have just been talking about—yet all three were first swarms."

"Please explain."

"In each of these three hives or colonies the laying queen which was wintered over commenced laying the same as did all the others, and the bees had no more desire to swarm while these queens continued to lay than did any of the other ninety odd colonies; but just before the season arrived when most colonies would have swarmed had the season been good, from some reason or other these three queens died right at a time when the hive was well filled with brood and bees of all ages. The queen having died, the bees set about raising them another; and, not being content to start only one queen-cell, as is almost always the case, they started from four to a dozen, which queen-cells were perfected over the larvæ they had chosen for the purpose. Here, you will see, is quite a difference from the prime-swarm method. In the one case the bees and queen were all agreed in the matter, in order that a perfect swarm should go out; so she laid the eggs in the queen-cells for the queens, they being perfected from the egg; while in this latter case the bees took larvæ of their own choosing, and built queen-cells over them. You see the difference?"

"Yes, I see. But go on."

"When the first one of these emergency queens came out of her cell, there were several others just ready to come out, and the bees

hesitated what to do till the first out began to pipe and the others to quawk, so finally concluded to send out a swarm to keep peace in the family, and soon out they came—a first swarm, to be sure, but was it a *prime* swarm, a perfect swarm, or a normal swarm?"

"From your line of reasoning, I shall be compelled to say no."

"No. It issued, to all intents and purposes, just the same as an after-swarm would, except that it had more bees, and the queens were what is called 'emergency,' queens, instead of those reared where the queen laid the egg in the cell for them at the start. They had no laying queen, and the swarm must be queenless so far as any egg-laying was concerned, till this young queen went out to meet the drone, and had eggs perfected, or from three to six or eight days; while the prime swarm had a queen ready to lay eggs in the first comb built as soon as the cells were deep enough. I think Dr. Miller must have failed to comprehend just at the moment he asked that question, that *prime* meant in a normal or truly perfect condition in every way."—*Gleanings* (American).

Queries and Replies.

[2838.] *Bees Dying Off in "Wells" Hive.*—I have a "Wells" hive stocked in both sides; the bees of one compartment are suffering from a disease of which I have had no previous experience. The brood—of which there is a fair quantity on five frames—looks perfectly healthy, compact, and normal in every respect, but the bees are dying off in great numbers. The dead bees, as you will see by the few which I send herewith, are nearly, and in some cases quite, hairless; many are dwarfed in appearance, but not all. Not a few have the abdomen much distended, from which, if pricked, exudes large quantities of pale yellow watery matter. The bees are dying, or being killed off, at a great rate, a hundred or more being found dead or dying on the ground on most days. The stock in question was a late swarm last year which was sent to the moors, where it did fairly well. I wintered the bees on ten well-stored combs, and they were not doctored or physicked in any way; they were also strong in number in the early spring, and have not been fed. The colony, as you may well suppose, has got no stronger, but rather the reverse, since mid-March. Notwithstanding all this, I may say the bees are quite as active as any of my other stocks, and the queen looks a fine healthy one. I therefore ask: Do you think it possible that scarcity of pollen in the hive may have anything to do with its present condition? There has been no robbing going on in this or any of my other hives. I shall be grateful for any advice you may be able to give me in the BEE JOURNAL, and should be greatly interested to hear if any others of your readers have at any time had a similar experience to my own. — MELLIFICA, *Buxton, May* 5.

REPLY.—The dead bees sent have the black, shiny appearance—denoting the total loss of all pubescence or hairiness—characteristic of persistent robbers. It is known that cases have occurred when a colony will possess a good few of these "robbers," who practically "thieve for their living," but they are luckily rare. We also know of still rarer instances where bees take to fighting among themselves for some reason, and many hundreds are slain before the trouble ends. We incline to the belief that this is the case with the colony in question, if you are quite certain that there has been no robbing going on. Should our view be correct, the trouble will probably stop in a short time, when honey begins to come in. An examination of the combs and watching the entrance will assist you in diagnosing the case, as there must be fighting going on inside the hive if it is as we suppose.

[2839.] *Bees on Shares.*—May I ask your valuable opinion on the following matter:—I own and farm here, and take great interest in bee-farming, and have now fifteen colonies of my own. But I am desirous of having enough to yield a large quantity of honey. In addition to this, there is no other apiary for some miles of me. I would like to meet some one who wants to get a number of colonies out to a good honey district. I would undertake to summer and winter the bees on my place, and am a fair amateur carpenter, having made all my own hives. The idea crossed my mind that, as it is a splendid district for bee-forage, with early-blooming flowers and willow-palm in abundance, along with fruit trees and growing crops of vetches, field-peas, and beans, besides white clover and trefoil all round, someone might be willing to join me in bee-farming. I thought that, as you are closely in touch with the business, you might kindly give me your opinion whether this scheme would be practicable, and likely to prove fairly remunerative for the persons concerned. If you think it workable, what would be the best means of carrying it out? I would be glad of your help in the matter if you have time.—W. H. S., *Edenbridge.*

REPLY.—The custom of working bees "on shares," as the term runs, is quite common in America, but we cannot say it would be quite satisfactory in this country, unless both parties to the contract are so placed as not to be dependent on the bees for their livelihood, and agreeable to take good and bad seasons with equanimity. Your district must be a very good one for honey if the description of its bee-forage is accurate—and we have no reason to doubt it—and should make bee-keeping more than fairly remunerative if well carried out on modern lines.

With regard to the best means of carrying out your scheme successfully, we must first suppose that you possess either sufficient practical experience to "know what to do and how to do it," otherwise a good text-book is about the first thing to invest in, and after careful reading you will yourself be in a better position to form an opinion on the subject.

[2840.] *Giving Brood to Queenless Stocks.*—Many thanks for your wire saying "No foul brood in comb," and I need not tell you the "clean bill of health" gave me much pleasure. I propose giving my queenless stock a frame of brood and eggs from another hive, and thus try my hand at queen-raising. In doing this is it necessary to clear the frame of bees before transferring it, or may I place the adhering bees in brood nest of queenless stock and thus help to increase its numbers?—W. Geo. Horobin, *Combermere, Wolverhampton, May* 1.

Reply.—Though not absolutely necessary to remove the bees from comb when transferring brood and eggs to an alien stock, it is better to do so. It only needs a sharp downward shake to jerk the bees back into their own hive or on to the floorboard, when they will at once run in. The adhering bees, if left on the comb when inserting it in the queenless lot, would return to their own hive on the first chance, and they incur risk of being killed as strangers if left on comb.

[2841.] *Granulation of Honey.*—1. I should be much obliged if you would say in B.B.J. why my extracted honey has become quite opaque and evidently candied? I have kept it in screw-cap jars since the autumn in a storeroom of very moderate temperature. The honey is from white clover, and was drained from the cells by putting the comb in a muslin bag, and no heat was used to make the honey run. 2. I should like to know whether the honey is eatable and wholesome when in this condition.—C. H., *Northallerton, April* 30.

Reply.—1. The granulation of honey is known to bee-keepers as one proof of its purity, and it is perfectly natural for it to become solid sooner or later. The time occupied in granulating, however, varies considerably, owing to several distinct causes. Among them we may name climatic conditions when gathered; temperature in which it is kept; and, chief of all, the source whence it is gathered. 2. We thought the veriest tyro in bee-keeping knew that honey was as wholesome when solid as in liquid condition.

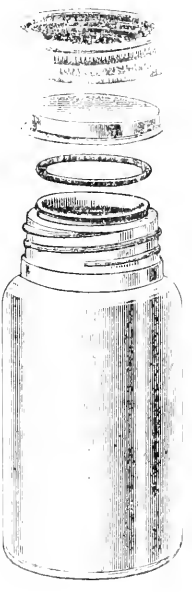
[2842.] *Replacing Drone-breeding Queen.*—On examining one of my stocks of bees to-day I found a quantity of brood, a great deal of which appeared to be drone-brood in worker-cells, as the cappings stand out quite one-eighth beyond the proper surface. So I came to the conclusion it contained a fertile worker. On further examination I discovered a fine queen-cell, which is, I think, almost ripe. I then decided to find the queen, if possible, and after considerable time I managed to capture her. On examining I saw she was somewhat disabled, having a portion of one leg gone, so I killed her, and left the queen-cell to hatch. I enclose dead queen for inspection. Under the circumstances I ask:—1. Have I done right, or should I give a cell from another colony? 2. I happen to have by me a virgin queen a few days old. Would it be better to let this take the place of old queen? I may add there are four frames of bees, all *workers*, not miniature drones, which latter are, I believe, the result of fertile workers. Hoping for early reply in B.B.J.—J. Charlton.

Reply.—1. Quite right, because, in the first place, the queen sent is suspiciously like an unfertilised one, in which case she would, of course, be worthless. If not too dry for *post mortem* we hope to decide this point, and will report next week if we can. 2. You had better keep the virgin queen till certain that the queen-cell is hatched out and the resultant queen is in the hive. If seen there the chances are better for her being mated—when drones are out later on—than for the other, which may already have started laying while still unfertilised.

NOVELTIES FOR 1902.

A NEW LEAKAGE-PROOF HONEY-JAR.

Messrs. Abbott Bros., Southall, are sending out a new honey-jar with metal cap, screw-top, and rubber ring—each separate as shown in cut—for which is claimed the merit of being the only screw-top jar absolutely proof against leakage. After examining the sample, we think the firm are fully justified in making this claim, seeing that both "cap" and "top" are of hard metal so well made and strong, with the "screw thread" in glass jar and metal top such as binds the parts down so firm and rigid that leakage is impossible. The jar, as will be seen, is good in shape; the glass is thick and very strong, and being moulded by machinery, is free from air-bubbles and risk of sharp, flake-like particles of glass being found in the honey. The peculiar wavy appearance in the glass is rather an advantage than otherwise, for it



imparts a brilliancy to light-coloured honey that improves its appearance very much.

Messrs. Abbott also supply a galvanised iron boiling-pan, primarily for boiling bottled fruits, &c., but very useful for liquefying granulated honey in the jars.

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close May 17.**

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed,** unless with late fee.

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** *Starting Bee-keeping.*—A correspondent writing (under the *nom-de-plume* of "Mot") from Parkfield-road, Willesden Green, N.W., kindly expresses his willingness to assist "E. K. H.," Brondesbury Park, N.W., whose request for assistance appears on page 180 last week. If, therefore, help is desired we will post the request to "Mot" when received.

C. H. Tomlinson (Hollywood).—*Spreading Brood.*—The reference to spreading brood has been omitted from later editions of the "Guide Book" advisedly, because of the amount of mischief, coming to our knowledge editorially, caused by the misuse—or careless use—of the instructions given on the subject. Spreading brood is useful if carried out with care and intelligence, but most mischievous if badly or injudiciously done.

David Brown (St. Andrew's, N.B.).—*Swarm-Catchers and Patent Rights.*—We are obliged for cutting from *The Australasian* sent, and will try to find the original letter that appeared in *Gleanings*, and thus get a clearer notion of Mr. Frick's drone-trap from the original cuts. Meantime we may remind you that the catcher in question is not "patented" at all, but only "registered," and that there can, in our opinion, be no doubt as to the rights of any one to make and use the trap referred to as a swarm-catcher if desired.

D. Airlie (Lesmahagow, N.B.).—*Young Bees Cast out in Spring.*—1. We can only account for the "baby bees" being not "thrown," but tempted to leave the hive, by the warm temperature at the time, and being unable to withstand the colder atmosphere outside, they have become incapable of flight. This is not a rare occurrence, as most experienced bee-men know that very young bees are lost in this way from no other known cause but the one we give. 2. *Bees Refusing Food in April.*—The food (if given as it should be) is not taken because the bees are clustered too far away to cause them to search it out. It is often found necessary to "coax" bees to the food at first by giving it warm, and allowing a few drops of the syrup to fall on the cluster of bees before inverting the feeder over them.

Rueben Andrews (N. Broadway, Wor.)—The hon. sec. of the Worcestershire B.K.A. is Mr. Phillips, Spetchley.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

J. P.—Comb sent is plainly characteristic of a bad case of foul brood, not a recent outbreak, for the dead larvæ is in the last stage of ropiness. We cannot understand an "expert" reporting your hives as "all right" less than a fortnight ago. The hive in question cannot have been examined if the "expert" knows his business. We are keeping your sample for forwarding to the said expert, if you will favour us with his name and address. Or we will return it to you for the same purpose, if desired.

J. Leeny (Stratford-on-Avon).—No disease in comb.

H. J. P. (Layer-de-la-Haye).—Foul brood is developing rapidly in comb sent.

J. Orpen, jr. (Wrotham).—You should read the instructions with regard to sending comb for inspection. Your sample, simply enclosed with letter in ordinary envelope, was, of course, smashed flat, and, in consequence, we cannot express any opinion at all as to its contents.

Goatfell (Arran).—We feel almost certain there was no disease in comb, but having a slight doubt, put your sample aside for a chance of microscopical examination, and it was inadvertently destroyed. You need not do more than keep a watchful eye on the stock from which it came.

Editorial, Notices, &c.

USEFUL HINTS.

Weather.—It has not seldom been made the subject of jocose remark, "Why do bee-keepers so often begin their articles with the weather?" The writer of "Hints"—from the time when the familiar heading appeared fortnightly, till to-day when he is content to give place to perhaps more "useful" matter—has been a special sinner in this respect. "Weather" is his first word, and well it may be, for there is no single word in our language more fraught with meaning or of more real import to the bee-man. Weather of the right sort means life and work to the bees and success to the bee-keeper; while if adverse, it means enforced idleness to the one and failure to the other.

It would be difficult to find a more forcible application of this truism than we have with us to-day. We are in mid-May, the month of flowers, and sunshine, and "swarms." Early bee-forage is luxuriously abundant everywhere, and for ten days or so at the end of April the outlook was full of promise for a glorious month for the bees when May-day arrived. Surplus-chambers were reported as filled with bees storing honey fast; breeding going on rapidly, and many hives full to overflowing; indeed, a few swarms were reported as having issued during the last week of April. Nothing could be brighter than the prospect, but Saturday the 26th brought with it a storm in the southern counties, and left behind a bitterly cold north-east wind that has hardly ceased to blow ever since. Anyway it put as sudden a stop to work and progress, so far as regards bee-life, as if a tap had been turned to stop running water. Hardly a day of the present month, so far, has been a working day for the bees, and on Friday, the 9th inst., a tremendous hailstorm—lasting about fifteen minutes in one district of Kent—left the ground covered nearly an inch deep with what looked like a solid sheet of ice, so solid and hard were the large heavy hailstones.

Feeding Needy Stocks.—The first consequence of the foregoing remarks is the need for prompt attention to stocks not actually known by inspection to be plentifully supplied with food. It is no use saying to oneself, "they had plenty in March," because the intervening time between then and now may have brought about such a depletion of stores as will astonish those who have not had practically experienced the effect of a couple of months' adverse weather in spring no strong colonies of bees. The consumption of stores in feeding tens of thousands of larvæ daily is simply enormous, and we therefore strongly urge every reader to make a personal examination without delay, and give warm syrup-food (not candy) to every colony not well supplied with stores. There is no sight more distressing to a bee-keeper than to find a strong stock—with perhaps half-a-dozen frames nearly full of sealed brood—entirely destitute of food, and every bee dead! Yet this will certainly happen if our word of warning is not attended to.

(*Conclusion of Hints next week.*)

SURREY BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The annual general meeting of the above Association was held at the County Hall, Kingston-on-Thames, on April 26, Major E. F. Coates (Vice-Chairman, County Council) in the chair; and among those present were Mrs. Watts, Miss E. M. Gilmour, Rev. C. S. Rowland, Messrs. A. Seth-Smith, H. Macan (Organising Secretary), W. A. Dawson, A. H. Miller, G. Walker, E. A. Stoppford, E. Walker, T. H. E. Watts-Silvester, M.R.C.S., P. W. Pocock, N. Drake, W. F. Reid, W. Welch, C.C., J. Kachler, H. Letford, W. Hartingham, W. Sole, and F. B. White (Hon. Sec.).

The Hon. Sec. reported the absence abroad of the President of the Association, General Sir Percy Feilding, K.C.B.; and Mr. E. J. Halsey (Chairman of the County Council) was unable to preside. Several gentlemen wrote expressing their inability to be present.

In moving the adoption of the report and balance-sheet, the Chairman said the Association had been doing a good work, and he was glad to see that not only had they been able to make both ends meet, but carried forward a good balance. It was also satisfactory to note that 120 new members had joined during the year, especially when they looked back six years to the time when the Association was reorganised, and, he believed, had a membership of only about 150, while to-day they could congratulate themselves upon a very large membership. The amount of foreign honey coming annually into the country was valued at £50,000, not a very large sum, but £50,000 per annum meant the rent of 10,000 cottages. Besides, many cottagers held allotments in addition to their own cottage gardens, and bee-culture would be of great assistance to them in adding to their incomes.

The motion was seconded by Mr. Welch, C.C., and supported by Mr. H. Macan, both gentlemen warmly eulogising the good work done by the Association.

The motion was carried unanimously.

A vote of thanks to the Surrey County Council for the grant of £150, made in aid of certain educational work carried out by the Association, was proposed by Mr. A. Seth-Smith, who said the success of the Association was largely due to the generous way in which the County Council had helped it; but for this help, the Association would not now be the success it was. Not only the County Council as a whole, but some members had assisted them very much, particularly Messrs. Halsey, King, Welch, and Macan.

The motion was carried *nem. con.*, as was also a vote of thanks to the retiring executive council, joint committee, and officers.

The Executive Council was appointed as follows:—Messrs. Archibald Seth-Smith, F. J. Bernau, R. C. Blundell, W. A. Dawson, F. S. Fletcher, G. C. Halahan, J. W. Lewis, A. H. Miller, W. F. Reid, Rev. C. S. Rowland, W. Sole, E. A. Stopford, H. E. Taylor, E. Walker, A. Watkin, T. H. E. Watts-Silvester, and F. B. White.

Mr. Maurice Marcus, High Trees, Redhill, was elected a Vice-President.

Mr. White said that the best way to promote a honey market was by holding an exhibition. The one held at the Crystal Palace last year had proved very successful. It had been decided to again hold the annual show at the Crystal Palace on September 18, 19, and 20, the Kent and Sussex Honey Show and the Royal Horticultural Society's Fruit Show being also fixed for the same date, so that the three shows would be held side by side, and he hoped members would support them.

Hearty votes of thanks were accorded the chairman for presiding, seconded by Mr. E. Walker, and to Hon. Sec. Mr. White, after which the meeting concluded.—(*Communicated.*)

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of April, 1902, was £4,431.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4775.] *A New Patent Hive.*—It has long been the dream of beemen, gifted with the benign power of invention, to originate a hive providing under the shadow of one roof all the best features hitherto in use in hive-making, with several added improvements which they deem will make their invention approach many stages nearer perfection than any hitherto on the market. It was my fortune lately to have a private view of such a hive—containing several undoubtedly novel and ingenious contrivances—which its inventor, Mr. A. Reid, Urray, Ross-shire, believes are improvements and advances on anything hitherto embodied in even up-to-date hives. He claims that by its means he can fully check or control swarming. He can trap his queen when he wishes it; yet he can allow the free exit and return of a young queen on her marital flight. He is enabled to dispense with additional nucleus hives, as he makes provision under the same roof for the formation of these, and his plan enables him to unite the small lots with their young queen to the parent colony without any loss of bee life, while he contends that the close proximity of the brood nest makes the question of nuclei-forming a matter of simplicity and certainty. As all his three or four tiers of frames are uniform in size, he has secured interchangeability (of course, at the sacrifice of the standard frame), and he can use his frames in the brood-boxes or in the surplus chambers as ordinary frames for extracting, or,

by a simple device easily added, as section-frames. By a new and novel style of entrance he contends that he has secured at least three improvements. He can provide ventilation *ad lib.*, he can entirely dispense with shade boards, and they are a great saving of bee-life in cold, windy, or snowy weather. He claims further that he has greatly simplified manipulation, and made hives much less of a sealed book. Without fully sharing a parent's estimate of his offspring, it may be conceded that several of the ideas embodied in the hive may may be set down as deserving of commendation. The inventor deserves encouragement in his attempts to further elucidate several features, especially those touching on manipulation of queens and swarm-preventing. Mr. Reid is already known as an inventor, having lately placed on the market a new sheep-dipper which is proving highly successful.

An Unseasonable Season.—A cold wave has swept over this corner of our island, and the almost summer heat of the closing days of April has been rudely dispelled by a wintry temperature accompanied by snow-showers, heavy rain, and floods. In many districts two or three inches of snow lay for days without a break. With us the 1,000 ft. line was clearly marked, for all above for a week lay one clean unbroken expanse of virgin white ; up to the tops of our highest Bens. As a contrast, over a fortnight ago a short holiday trip through five northern counties showed vegetation looking remarkably well and luxuriant for the season. Bees were then busy carrying in both pollen and honey, and when examined they showed a fairly good spread of healthy brood, with numerous young bees in evidence. Here, for over a week, not a bee has been able to look outside. Considering the wide spread of brood in some of my own hives before the change, I will be anxious on the first fine day to examine and note if much of it has been chilled. Later.—Bees have already got over their period of depression, and are once more rolling in the pollen as if they wished to make up for lost time.

Spring Violets.—Amongst the many flowers now adorning the landscape one of the most interesting is the sweet violet (*Viola adorata*). Unexpectedly we discover their presence when we feel the sweet breath of the south "upon a bank of violets stealing and giving odour." Some of the other varieties, such as the dog violet, the marsh violet, and the *Viola tricolor*, with its varied colour, the origin of all our garden pansies, are even more beautiful, and deserve the praise of the poet, who describes them as "sweeter than the lids of Juno's eyes." Later in the season we have two of the species adorning our moorlands. The yellow violet (*Lutea*) is an ornament to our dry heaths, and the marsh violet is even more so in our softer bog lands. None of them, however, are first-class bee plants, but surely we can admire beauty even when utility is lacking.

Queenless Hives.—In my last comments I remarked on these, and I have since had information leading me to conclude that this spring there is an unusual number of these. As a rule the best possible plan is to join on the bees to neighbouring hives. So much time is lost before queens can be reared, and the bees have dwindled and aged so much, that the value received bears no fair ratio to the trouble incurred. At times a good queen may be purchased, but, as a rule, such queens are not on the market at this time of the year ; and in a large percentage of cases, those purchased now will prove weak or aged and not worth spending good money on.—D. M. M., *Banff.*

BEES IN THE HIGHLANDS.

[4776.] In sending my subscription for current year, I have to express my great pleasure at the many interesting pieces of information your paper has afforded me. I wish it what it deserves, very great success. I am sorry that up in these Highland parts the spring has been so very late and cold, and I envy those who have already had swarms, as instanced in your columns. However, we make a good thing off the heather, which, I suppose, in England you have only in detached patches. I have got six good stocks, but I mean both by purchase and otherwise to increase them considerably. I have ordered, and they have come to hand, six frame-hives for this summer's increase. Perhaps I am too sanguine in my expectations ! However, should nothing come of it, I have at least this satisfaction, that I have enjoyed many peaceable hours amongst the bees, which of itself is a fair reward for slight expenses incurred.—WILLIAM STUART, *Tombae, Glenlivet, N.B., May 9.*

COMB-BUILDING IN CANDY BOXES.

[4777.] Referring to the letter of your correspondent, "G. E. K." (North Wales), I put two 1-lb. boxes of candy on a hive about a month ago (one above the other), and last week, on removing them to examine the hive, I found the bees had filled them with honey (well sealed), also two patches of drone-brood sealed. I also cut out three queen-cells from brood-chamber, and gave them a crate of shallow frames.—J. BOYES, *Cardiff, May 6.*

[4778.] In reply to your request on page 180, re bees building comb and breeding in candy boxes, I beg to say that when examining my bees at the beginning of April I found several of the candy boxes full of comb, with eggs, I daresay, in half of the cells (mostly drone-cells). There was also honey and pollen stored in others.—F. R. COURT, *Green-street, Kent, May 7.*

ADULTERATION OF HONEY.

THE LAW AGAINST IT IN THE U.S.A.

It may be useful to British bee-keepers—for reference in case of need—to have in print the text of the law against adulteration as recently passed by the State of New York, and now the law of the land in that State. The full text of the Bill, as given in the *American Bee Journal*, reads as follows:—

"An Act to amend the agricultural law relative to prevention of disease among bees, and to add two new sections thereto relative to honey, to be known as Sections 80A and 80B.

"*Section* 2.—Said Chapter 338, is hereby amended by inserting therein, after Section 80 thereof, two new sections, to be known as Sections 80A and 80B, and to read respectively as follows:—

"*Section* 80A.—*Defining honey.*—The terms 'honey,' 'liquid or extracted honey,' 'strained honey,' or 'pure honey,' as used in this Act, shall mean the nectar of flowers that has been transformed by, and is the natural product of the honey bee, taken from the honey-comb and marketed in a liquid, candied or granulated condition.

"*Section* 80B.—*Relative to selling a commodity in imitation or semblance of honey.*—No person or persons shall sell, keep for sale, expose or offer for sale, any article or product in imitation or semblance of honey branded as 'honey,' 'liquid or extracted honey,' 'strained honey,' or 'pure honey,' which is not pure honey. No person or persons, firm, association, company or corporation shall manufacture, sell, expose, or offer for sale any compound or mixture branded or labelled as and for honey which shall be made up of honey mixed with any other substance or ingredient. There may be printed on the package containing such compound or mixture a statement giving the ingredients of which it is made; if honey is one of such ingredients, it shall be so stated in the same size type as are the other ingredients; but it shall not be sold, exposed for sale, or offered for sale as honey; nor shall such compound or mixture be branded or labelled with the word 'honey' in any form other than herein provided; nor shall any product in semblance of honey, whether a mixture or not, be sold, exposed, or offered for sale as honey, or branded or labelled with the word 'honey,' unless such article is pure honey.

"ABSTRACT FROM THE AGRICULTURAL LAW RELATIVE TO PENALTIES.

"*Section* 37.—Every person violating any of the provisions of the agricultural law shall forfeit to the people of the State of New York the sum of not less than 50 dols., nor more than 100 dols., for the first violation, and not less than 100 dols. for the second and each subsequent violation. When such violation consists of the manufacture or production of any prohibited article, each day during which or any part of which such manufacture or production is carried on or continued, shall be deemed a separate violation of the provisions of this article. When the violation consists of the sale, or the offering or exposing for sale, or exchange of any prohibited article or substance the sale of each one of several packages shall constitute a separate violation; and each day on which any article or substitute is offered or exposed for sale or exchange shall constitute a separate violation of this article. When the use of any such article or substance is prohibited, each day during which or any part of which said article or substance is so used or furnished for use, shall constitute a separate violation, and the furnishing of the same for use to each person to whom the same may be furnished shall constitute a separate violation.

"*Section* 2.—This Act shall take effect immediately."

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The apiary at Blairgowrie, part of which is shown on next page, recalls to mind the only time we saw it, on a very sad occasion, when we made the long journey northward to accompany to his last home all that remained of our dear friend the late William Raitt, whose sudden death some dozen or more years ago will be remembered by our older readers. We are glad to find his son David still in the bee-trade, and the hives on the old ground at "Beecroft," and have no doubt our bee-garden picture this week will recall pleasant memories of one who was in his day one of the ablest and most worthy among the bee-men among us at the time. The following notes will possess interest for readers of the older school as being from the son of a worthy father:—

"I fear I cannot wield the pen as did my late lamented father, for whatever form the falling of his mantle took it was not literary-wise. Part of the hives shown in photo. are come down from 'Beecroft' days as far back as thirteen years ago, since their late master bade adieu to this mundane sphere. Like every true enthusiast, he infected his 'laddies' with a love for the little labourer so dear to him (he used to fetch us 'up' with imported queens under his pillow overnight), and so we caught on to the 'hum,' and deep down in my being—partly because of his great love for them—I find myself in the true succession.

"Of course, business has claimed most of my time these past five years since taking over the concern, and hence I will *not* pretend to pose as an authority, but in a natural way will give my experiences, and in so doing I think you will not readily consign this lot to the W.P.B.:—It is only fair, and the Creator meant it so, to work for profit as well as pleasure, and all business folks like to ee

things stand on their own individual legs, and so I have, I *confess*, worked the bees for profit. In a district like ours it can be done, but the man at the helm must be lively. We get supers well filled with rasp and clover honey here from June to July, but there is no great abundance of forage, and I fancy the multitude of apiaries around lessens appreciably the nectar available. We do not have out-apiaries yet, but intend to, when we can 'hitch up' our steed to our buggy and off some fine morning to the four or six mile distant lot, with extractor and all, and fetch home the spoil. Last year, in the outskirts of the town, we had several stocks yielding us easily 84 lb. surplus honey each, left to themselves almost so far as attention goes, and altogether we reckoned we had from fourteen stocks about 670 lb., giving a value of about £24. Had the heather season been fair the lot of ten we had up some fourteen miles up the glen would have swelled the coffers of their master. It seems farcical to hear the cry '*Bees* don't pay.' I think it is seldom heard nowadays in these parts.

"As to disposal of crop, it is an easy matter. We grade sections, and offer best finished ones at 6d. to 1s. a dozen extra, and so on; and besides our own we handled a ton or more for others last season. At present we are bottling up and sending out a large consignment to Cape Town, as there are some Scotchmen there who prefer the 'rale heather.' We strongly believe in attractive 'get up.' At present we send out a lot with plain cheap jars, with cork wads and tinfoil covering, which took clean and neat, and a change from the stereotyped screw-cap jars, &c.

"From our show-room we sell the 1-lb. sections in card cartoons with tape, so that dainty ladies have no waiting, and little objection to carry same, and the printed name, &c., advertises the produce.

"Mr. Calvert (business manager of the A. I. Root Company, U.S.A.), when over here in 1900, expressed himself as surprised at the attention paid to the get up of honey in this country; but as we do not handle in 'carload lots' as they, it becomes us to do so, and get 'gilt-edged' prices.

"Well, I must pull up. I might have enlarged on my 'experiences' with tall sections, &c., if room permitted. Suffice it to say, the less innovations along that line the better, in my opinion, for it is absolutely essential to success that a standard size, as in frames, &c., fixed on by all producers, especially seeing that *our* 'sphere of influence' is inside our rugged coast-line and of so few hundred square miles.

"In closing, let me, in introducing myself through this picture, thank all who are personally unknown, yet whose business relations are highly valued and set down as an earnest of the dream of the poet when he sang of the time coming—

"'When man tae man the warld owre
Will brithers be an' a' that.'"

MR DAVID RAITT'S APIARY, BLAIRGOWRIE, PERTHSHIRE.

BEE-FARMING FOR LADIES.

Amongst the smaller varieties of farming there are perhaps few which provide a more suitable industry for women than that of bee-keeping. The stock required to begin with is by no means expensive—probably about £2 10s., covering the whole—hired labour is not necessary, and, provided that a sufficient harvest is to be found in the immediate neighbourhood, the difficulties are greatly minimised. It may frankly be stated that, unless the bee-farm is run on a very extensive scale, it is scarcely likely to prove sufficient as a sole source of income; but worked in conjunction with other branches of agriculture it becomes a valuable adjunct. For instance, bees and poultry can be made quite complimentary to each other, for the tops of the bee-hives can be so arranged that incubators stand on them; they receive thus just the right amount of heat for the hatching of the eggs. A great number of ladies are interesting themselves in the keeping of these interesting little creatures, and many young girls living in the country are able to make quite a nice little annual income by keeping bees without in any way interfering with the farm or garden, or whatever their surroundings may consist of. One of the first steps is to get an insight into the absolutely practical management of the hives, and this is generally possible since most apiarists are very glad to give advice to intending bee-keepers. Another necessity is to procure a good manual on bee-keeping, and this done and read, marked, learned, and digested, the bee-keeper, provided she be painstaking and energetic, is already on a fair way to success. Certain counties are naturally better than others for the cultivation of these industrious little insects, but it is possible to own a thriving hive or two in almost any neighbourhood. There are several harvests for the bees besides the always desirable fragrant flower garden—the fruit blossom, for instance, is excellent, and such crops as sainfoin, cinquefoil, and white clover—but perhaps the best honey source of all is the trees—the oak, the sycamore, and the lime. The price fetched by honey generally varies from about 1s. to 1s. 6d. per lb. May is the best month in which to begin with a swarm. The old rhyme tells us that a swarm of bees in May is worth a load of hay; a swarm of bees in June is worth a silver spoon; but a swarm of bees in July is not worth a fly. Of course, there is the objection in bee-keeping of being stung; but the owner who can keep herself quiet soon wins the respect of her hive occupants, and there is no attempt at this most unpleasant expression of their ill-feeling. When possible, surplus honey should be taken off early in the season, when it can be sold at a much higher price than obtains later in the season in the market. Of late years many of the larger agricultural societies and associations have encouraged the apiarist, and prizes are offered for honey at the shows. The British Bee-keepers' Association has greatly encouraged ladies to take up this work, and a number of them have become members; indeed, it is almost essential to join some society affiliated with any special farming, since information and advice and the services of an expert are placed at the disposal of the associates for very moderate fees. One lady—Miss Gayton, of Much Hadham, Herts—has been most successful with her bee-farm, and she acknowledges that her entire education in the matter came from reading books and pamphlets on the subject, and by asking questions of every apiarist she met. She had the honour of supplying honey to her late Majesty.—LAURA ALEX SMITH, in the *Belfast Northern Whig*.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Revue Internationale d'Apiculture quotes from the *Schweizer Bienenzeitung*:—"One often hears that in old combs the partitions of the cells are so thick that the young bees cannot develop naturally for lack of room. Dr. Branich assures us that this is quite a mistake. He found that the thickness only varies from $\frac{1}{4}$ to $\frac{1}{5}$ millimeter, whereas the floors of the cells are sometimes 10 millimeters in thickness; but in this case the bees will lengthen the cells that the contents may remain the same. Invariably four to five cells can hold 1 gramm of water. So he judges that the old comb may be used without fear for the brood-nest."

The Same.—Bee-keeping in Algiers.—In this beautiful country apiculture might do wonders and will, doubtless, but at present the outlook is not favourable. The import of honey is enormous, whereas the export ought to be immense. Algerian honey is the best the world can produce in perfume, colour, and quality. The soil rich in oderiferous plants yields an incomparable honey harvest, perpetual spring reigns in many parts of Algeria. Apiculture is, as yet, very little developed; there are said to be about 24,776 bee-keepers in the country. The native population, as well as some of the colonists, use the Arab hive—cylinders of cork bark or a box woven from the dried stalks of fennel, but since the Apicultural Society has existed many modern hives have been in use. The honey harvest is of variable duration, generally short, from March 15 to May 15 in the mountains, longer in the wooded regions and those planted with eucalyptus, which lasts nearly all the year in the lower parts of the country. The Arab hives give about 5 lb. to 6 lb. of honey, but the frame-hives will yield from 20 lb. to 100 lb. each. The consumption of honey by the Arabs and Jews is very great, and Algeria does not

as yet produce enough for its own use. Prices vary from about 1s. per kilo (2 lb.) wholesale to 2s. to 2s. 8d. retail. Eucalyptus honey is much sought after by the invalids who winter in Algeria.

The Algerian bee is dark in colour, very active but irascible, and has the fault of swarming too freely, as many as a hundred royal cells have been found in one brood nest.

The Same.—There is to be an international apicultural exhibition in Madrid during the month of May, 1902. The prices of honey and wax on the market at Barcelona on December 15, 1901, were as follow:—Native wax, per kilo (2 lb.), 2s. 5d. to 2s. 6d. First-class (Aragon) honey, 100 kilos (200 lb.), about 42s. to 45s.; second-class (Catalonian) honey, 100 kilos (200 lb.), about 38s. to 42s.

L'Apiculteur.—A bee-keeper writes from the Argentine Republic that the wax-moth (*Galleria cereana*) is there a great pest to the apiary. He succeeded in destroying enormous numbers of these and other noxious insects by means of a small lamp standing in a large shallow receptacle filled with oil, and placed in the centre of the apiary. The moths, flying against the lamp, fell into the oil, and on a calm night the receptacle would contain so many insects as to form quite a solid mass.

Echoes from the Hives.

Pilsley, Chesterfield, May 12.—Since my last "Echo," written some two months ago, we have not improved very much in the weather line—in fact, I think it has been colder this last week than it was in March. What with blinding snowstorms during the day and the crisp hoar frost seen in the early morning the aspect has been wintry enough to damp any bee-man's ardour. He sees hundreds of damson-trees around white with bloom, and sometimes white with snow alternately two or three times a day. The bees have had an odd hour's work on the bloom when the sun got a chance, but a peep at the combs tells its tale; we found stocks that had, a month before, three whole combs well stored with honey, and, as we then supposed, amply provisioned until natural food could be had in the fields and orchards, when looked at last Friday showed hardly as much left as would sustain them for three days. That condition meant giving syrup-food at once as a matter of course.

It did not take my bees long to clean honey out of sections that had partly granulated during the winter. I have put eight or nine such sections on during the last few days, and they were soon cleaned out. I have found them very useful for feeding purposes, seeing that when I opened one stock they had hardly a bit of food left in the hive. I find the dandelion blooms plentiful in the meadows about here are capital pollen-yielders, every bee coming in now is loaded up with pollen from that source. I doubt we shall see no May bloom on the hawthorn this year, as the hedges are not in full leaf yet, and the apples, too, do not look like blooming before June. We have a nice lot of clover-fields close to, and if the weather will only take up, we shall have a bountiful harvest from it; but I hardly expect honey to be as plentiful as last year, seeing that the brood-boxes will be empty to start with.—Tom Sleight.

Queries and Replies.

[2843.] *Loss of Queen in Spring.*—I began bee-keeping last July with a swarm which seemed to do all right till October, when I noticed that drones were still present, and in consequence I suspected the colony was queenless. I was, however, told it was too late to do anything then, but on examining the frames this spring I found brood in them, also two empty queen-cells on bottom of two frames. I concluded that the bees had re-queened themselves last back-end. Three weeks ago, however, on examining frames I found a large queen-cell on side of one frame, although there was plenty of room in the frames for queen to lay in. Anyway, I gave them another frame of partly worked-out foundation, and I examined hive again a week ago, and found a queen-cell nicely capped over. I therefore kept a close watch on the hive, and last night, on again examining, I found a queen-cell empty, but it had a large hole in the bottom and one at the side. On looking for young queen I found enclosed bee on the top of the frames. I also at the same time found eggs in cells, and therefore conclude, if I find an egg in three days' time, the old queen is still in the hive. I forgot to mention that I saw about half-a-dozen drones on the frames and about sixty more in cells capped. I wish to ask:—1. Is the enclosed a young queen? 2. Do you think the bees intended swarming? 3. Did I do right in putting another frame in? —Beginner, *Ramhill, May* 8.

Reply.—1. No; an adult. 2. There is nothing to show any intention to swarm. 3. It can do no harm to try them in queen-raising, but it will not be likely to succeed.

[2844.] *Are Decoy Hives Illegal? Claiming Runaway Swarms.*—1. Is it illegal to put empty skeps or hives in the apiary to decoy swarms? My bees are located some distance away from where I work, consequently I am not able to watch them. I am told it is against the law to do this. Besides, I have no wish to decoy other people's bees into my hives; and the nearest neighbour's bees to me are three-quarters of a mile away. 2. I also

ask, can I follow my own swarm and take them if they go into other people's premises? I am informed that if my bees swarm and settle, or "cluster," on another person's land, garden, or premises, I cannot take them if the person objects. Please answer these queries through the B.B.J., to which I am a subscriber.—W. P. LLOYD, *Buckland Brewer, N. Devon, May* 8.

REPLY.—1. No; the question is merely a moral one, and in your case it may well be excused. Should it be proved that a neighbour's swarm has been decoyed into one of your hives, give him a swarm in return. 2. If the swarm is seen to issue from your hive and is not lost sight of by the person who saw it go, the bees can be claimed by law if a proper demand is made at the time.

[2845.] *Dealing with Drone-breeding Queens.*—When I got the B.J. of May 1, and read your reply on page 180 with reference to my query on drone-breeding queens, I was not surprised. I have, in consequence, cut out all the brood from the combs and removed the queen, which latter I enclose herewith, and have given to the bees a frame of eggs, brood, and bees from a very good stock. Is this the best thing to do under the circumstances?—C. R., *Malling, Kent, May* 7.

REPLY.—Yes, but it is not certain that a queen will be raised and safely mated from the eggs given. Having given the bees the means of re-queening themselves, you can only await results.

[2846.] *Preventing Swarming.*—1. I have sixteen hives and am anxious to prevent swarming by a surer method than giving more room than required. Do you approve of the plan of cutting the wings of queens, and when swarming take queen out and replace bees in swarmed stock, then after seven days cut out all queen cells but one? This was told me by one who works this method every year. If I do this I must sacrifice all my queens as they swarm, which I do not like as one gets attached to queens. I do not wish to augment my number of hives, so swarms will be little good to me except for strengthening weak stocks in autumn. I have supered all my hives. 2. What is the best way to stop robbing? Mine rob in spite of my trying all suggestions in Cowan's "Guide." What fuel do you suggest as best for smoker? 3. Do you consider run honey or sections the most profitable?—*Lymington, May* 12.

REPLY.—1. We do not like your friend's plan of preventing swarming, nor is there any better and safer means of attaining that end than are plainly set forth on page 20 of "Guide Book." 2. If once robbing has been allowed to go on either unseen or through carelessness, it is past the wit of man to stop it; and when an apiary is once demoralised—as we fear yours is—the task is almost hopeless in the hands of an inexperienced or an injudicious bee-keeper. Patience and perseverance may stop it, and the methods you already have in your text-book cannot be improved upon. 3. All depends on the demand. If extracted honey can be sold well, it pays best.

[2847.] *Replacing Lost Queen.*—Six weeks ago I had up from the country several hives of bees, one of which when examined a fortnight afterwards had only a little patch of drone-brood on two frames. I made two subsequent examinations at intervals of a week and found more drone-brood, and on no occasion was there any worker-brood at all, nor could I discover the queen. The stock appears considerably lessened, and I shall be glad if you will kindly say:—1. If re-queening would be probably successful after so long a time since the queen must have been missing? 2. How many frames—or rather how *few*—frames, of bees would make success probable? 3. If the result should be doubtful, what should be the proper course to adopt? I have ordered a queen and am not sure whether I have done right. Your kindly reply in this week's B.B.J. would very much oblige and help me?—WM. SMITH, *Dulwich Village, May* 12.

REPLY.—1. The probability is the queen has been missing for a much longer period than six weeks, and in consequence the stock is not worth re-queening.

[2848.] *Bees Disappearing from Skep.*—Would you be kind enough to explain the following? A friend of mine had a good stock of bees in a skep which last year yielded about 10 lb. of honey in super. A second super was left on, to which the bees had free access. He now finds about 8 lb. of honey in the super, but the bees are gone—not a single bee left. Can you explain the *probable* cause of their disappearance? I may say that the stock of bees covering four frames in November, 1900, about which you kindly advised me through the B.J. some time ago, is now my best stock. It was kept alive by means of candy and warm wrappings of chaff and cork-dust.—"PUZZLED," *Uxbridge, May* 7.

REPLY.—The details given are too vague for us to form a reliable opinion. The skep may have become queenless, and the bees have left the hive and joined on to another lot. An examination of the skep—to an experienced eye—would probably clear up the mystery of the bees deserting it, but one cannot judge from a distance.

[2849.] *Transferring Bees from Skeps to Frame-Hives.*—Could you kindly tell me through BEE JOURNAL the best way of dealing with some bees in skeps? I bought them a short time ago. I was advised to put the skeps each on the floor-board of a modern hive holding ten frames. I have done so, and they each seem very strong stocks. I should therefore like to know the best thing to do now. Would it be wise to put supers on the top of the skeps or to let them swarm, and then at the end of the time to drive them out of the skeps and put those into frame-

hives? I take your BEE JOURNAL regularly and also have your "Bee-keepers' Guide Book," but am only a young beginner with bees.—P. W., *Atherstone, May 7.*

REPLY.—Prepare your modern hive by filling the frames with full sheets of foundation, and when ready set the skep on top-bars as directed on page 140 of "Guide Book." The bees will then transfer themselves. By so doing you will secure the best results as a beginner.

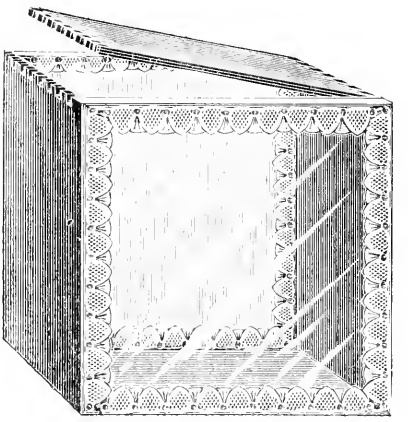
[2850.] *Allowing Bees to Transfer Themselves.*—1. In August last year I discovered that the bees in one of my hives had built their combs across the frames through having had no starters of foundation to guide them. I therefore placed the body-box containing the cross-built combs above another set of frames properly fitted with sheets of foundations. Unfortunately, however, I was away from home when the bees were packed up for the winter, and, in consequence, the two body-boxes have remained joined together ever since. Will you kindly tell me when will be the best time to remove the top lot of frames with the box, bearing in mind that in this part of the world swarming begins the first week in June? 2. I am only partly successful with supers, and not at all with sections, although I procure the best foundation I can get from England. I have tried putting honey on the comb-foundation to attract the bees to it, and thereby induce them to start working in the surplus-chambers. I therefore ask, Would you recommend putting the rack of sections below the regular frames for a day or two previous to placing them on the top? I am very careful to keep my bees warm when working supers for extracted honey or when sections are on. I use the "Cowan" hives, and find them very good.—P. J. B., *Vienna, Austria, May 10.*

REPLY.—1. Should the bees have got well at work in the lower body-box, and the queen have made it the brood-nest of the colony, you may remove the upper box any time if there is no brood in the combs. Or, if preferred, the upper box may remain on as a surplus-chamber for removal when full (or when the season is over) for extracting. 2. Unless your hive has been properly prepared for getting sections started below the brood-chamber, we should not advise trying the plan named. It is a troublesome method to carry out with makeshift hives, but simple enough if the hive is specially built for it.

NOVELTIES FOR 1902.

LEE AND SON'S IMPERIAL SECTION-CASE (REGISTERED).

This novelty is a folding wood section-case made on the same principle as an ordinary one-piece section. It is, as seen in the cut, glassed on both sides, and is correctly lace-edged for show purposes, so that there need be no fear of disqualification for being over-laced. It is also considered by the makers that this is the perfection of casing for high-



Lace-edged Wood Section-Case.

class sections, the perfect cleanness of the wood making it very attractive, while not too costly for general use. It may be had of all the principal dealers in bee-goods, or from Messrs. Lee themselves.

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries close May 17.**

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed,** unless with late fee.

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Good money prizes. Schedules from P. W. Smith, Secretary, 22, Leam-street, Leamington. **Entries close July 31.**

August 7th, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. *Entry free.* Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey Trophy Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

A. F. G. H. J.—*Joining Bee-keepers' Association.*—For information regarding advantages in membership of the B.B.K.A. and its affiliated county associations, and also for particulars of examinations for experts' certificates, apply to the secretary B.B.K.A., Mr. Edwin H. Young, 12, Hanover-square, London.

"HARDBAKE" (Cranbrook).—*Removing Propolis from Excluders.*—1. The propolis may be dissolved with methylated spirits (alcohol), but we never care to use it, preferring to scrape it off with a blunt knife having a pliant blade. *Irritable Bees!*—2. The cause of irascibility is no doubt largely attributable to the bottom-bar of the frames being stuck fast to the floorboard, as stated. We should lift out each frame singly and remove the bottom-bar, then cut away about half an inch of comb at bottom edge, and replace the frame minus bottom-bar. Or an alternative scheme would be to remove the frames temporarily into a hive of proper depth, *i.e.*, 9 in., then tack a ½-in. strip of wood to bottom edge of the home-made body-box, and thus make it 9 in. deep. When this is done, return the frames without disturbing the present bottom-bars. *Mica for Sections.*—3. Mica is not cheaper than glass, as you suppose, if cut to 4¼ by 4¼ size section. It is dearer.

JOHN DANCE (Berks).—*Birds and Bees: Using Firearms near Roadways.*—1. The fact of "having a licence to carry and use a gun," as stated, will not free anyone from the legal consequences of injury to passers-by from the careless use of firearms. At the same time, we cannot quite see where the risk comes in if you have 30 yards space between the bee-hives and the roadway. Any fear on the subject may, however, be removed if you frighten the offending sparrows by using blank cartridge. 2. *Italianising an Apiary.*—To introduce an Italian queen into an apiary of seventeen colonies of bees can hardly be termed "Italianising." We should call it hybridising, and no doubt the whole of your stocks would show more or less of the Italian strain in a year or two if drone offspring of the foreign queen are allowed to become plentiful. 3. We cannot assure you with regard to the temper of resultant hybrid bees, but you might make a point of weeding out viciousness in temper, if such occurred, by re-queening. We recommend a trial of one Italian queen, and be guided by after results.

H. W. C. (Worcester).—*The Hop-plant as Bee-forage.*—1. We have never heard of bees working on the blossom of the hop-plant, and it is quite certain that no honey is gathered from it, in view of the fact being unknown to bee-keepers located in the midst of the hop gardens of Kent. 2. Field beans are known to yield a plentiful supply of honey in some seasons. Bean honey is rather dark in colour, and of medium quality.

(REV.) C. C. J. (Diss).—1. The sample of honey sent is poor in quality, and has not been well ripened. It has granulated with a very coarse grain, and, owing to its dark colour and the other fault mentioned above, it looks very uninviting to the eye. 2. There is no accounting for granulation generally, but a little stirring of the bulk at intervals of a few days while granulation was proceeding would have tended to make the honey more smooth in grain when it became solid.

Suspected Combs.

C. C. (Norwich).—Comb is slightly affected with foul brood.

O. COLLINS (Lee, S.E.).—Comb is in a bad state. There is foul brood in it, and the fact of drone-brood being reared in worker-cells shows that the queen—if there is one in the hive—is old and worn out.

X. Y. Z. (Cornwall).—All three pieces of comb are diseased.

FRAS. J. L. KING (Walthamstow).—Comb contains nothing worse than hard mouldy pollen. We see no trace of the "small insects" mentioned as being in some of the cells. Delay in reply was unavoidable.

J. T., JUNIOR (Notts.).—Foul brood is developing in comb sent, and as drone-brood is being reared in some of the worker cells, we advise entire destruction of the stock. The combs are old, the queen worthless, and with seventeen healthy colonies liable to infection, to attempt a cure would be folly. We therefore say stamp the mischief out at once.

"NUMBER 4" (Kidderminster).—There is foul brood in a few cells of comb sent; but it cannot be termed a bad case by any means.

J. L. (Linton, Cambs.).—Comb is badly affected with foul brood.

HAZLEWOOD (Birmingham).—Foul brood is plainly developing in a few cells of comb, but it has all the appearance of being kept under partial control, seeing how few cells are really affected with the disease. With regard to former specimen sent for inspection, there was at the time such an accumulation of samples that some "mixing up" evidently took place to account for our replies.

F. HURDWELL (Yorktown).—Comb contains chilled brood only. No disease about it.

*** *Several Queries are unavoidably held over till next week.*

Editorial, Notices, &c.

USEFUL HINTS.

(Concluded from page 191.)

STARVING BEES IN MAY.—The need for a word of warning, such as we ventured to offer last week, has been amply verified by accounts since received of strong colonies of bees found quite recently in famine-stricken condition, and that, too, within a month of Midsummer's day! We have been inquired of—by one who finds his bees absolutely starving—as to "the best means of affording immediate and full relief in case of stocks being found almost destitute of stores." Our reply is: A comb of food from another stock if such be available. But failing this, the best substitute will be found in a comb half-filled with good syrup-food made slightly warm, and placed close up against the cluster of bees. It is a simple matter to lay the frame—face up—on a dish and pour the syrup into the comb in a thin stream, so that the air is allowed to escape as the liquid runs into the cells. In this way about a pint of syrup may be poured into each side of a comb. Should many stocks require feeding in this way, several combs may be filled simultaneously by standing them up in a large pan (a fish-kettle does nicely for the purpose) and pouring the syrup slowly into the pan. The liquor gradually flows into all the cells, expelling the air as it rises, and thus every comb is completely filled with the syrup-food. One standard comb thus charged will be ample provision for a stock for three weeks, or until natural food is coming in from the outside.

THE INSURANCE SCHEME. — Bee-keepers will have now had plenty of time in which to read and inwardly digest the details of the plan of insurance—as presented in our issue of the 8th inst. — very carefully and fully thought out by the committee of the B.B.K.A., to whom was entrusted the task of framing a workable scheme. It is sincerely to be hoped that the scheme and the "conditions" attached will meet with cordial and general acceptance, for however easy it may be to suggest what are thought to be improvements, we venture to say it will be extremely difficult, if not impossible, to get a reliable firm of underwriters to accept responsibility beyond that involved in the conditions printed on page 181. The permanence, or otherwise, of the scheme is now in the hands of bee-keepers themselves, and we trust the response, in the shape of bee-keepers insured, will represent an ownership far exceeding the 5,000 hives which have been counted upon as the minimum number wherewith to make a beginning. Nor do we for a moment suppose that any demur will be made with regard to the sum of sixpence per annum fixed upon as the minimum premium. Anything below that sum would not be worth dealing with, and for the rest, our personal opinion is that the bulk of insurers will need to pay no more than from sixpence to a shilling per year in order to secure all advantages conferred by the scheme. We say this in view of the comparatively few bee-keepers in this country who own more than a dozen hives of bees.

TO CORRESPONDENTS. — While the busy working bee-season is still young, we respectfully desire to ask for the co-operation of correspondents in saving time and trouble all round, and not a little annoyance to by no means under-worked Editors in particular. We refer to the editorial and business departments respectively of this office, and to the way in which these departments may be helped or retarded by correspondents, according to the manner in which instructions devised for mutual benefit are attended to or disregarded. In the first place, letters to the BEE JOURNAL for the editorial department should be addressed to "Editors," and to "Manager" if on business matters, the respective "copy" for each being written on separate sheets. Editorial letters for the *Record* should be addressed to "W. Broughton Carr," and business letters to "Manager, *B.K. Record*." It frequently happens that letters for BEE JOURNAL reach us addressed, "W. Broughton Carr, 17, King William-street." These letters are, in consequence, often filed as *Record* copy, and may thus miss insertion in the paper for which they are intended. A bad habit has also been growing of late, viz., the, no doubt inadvertent, failure to send name and address when writing under a *nom de*

plume. We hope this omission will be remedied if publication is to be assured.

We must also refer to the neglect of proper care in sending samples of comb in cases of suspected foul brood. The bulk of our correspondents, we are glad to say, read the standing par. giving directions how to send samples, but some few are still so regardless of our wish as to forward comb so smashed in post, and letters so filthy and unfit for perusal without washing, that we have the samples promptly burnt without any attempt at perusal or inspection. Finally, we invite attention to the *blue pencil marks* on wrappers which now serve to indicate overdue subscriptions, in lieu of the coloured wrapper formerly used.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held on Thursday, the 15th inst., at 105, Jermyn-street, S.W., Mr. W. F. Reid being voted to the chair. There were also present Miss Gayton, Major Fair, Dr. T. S. Elliot, Messrs. R. T. Andrews, W. Broughton Carr, W. H. Harris, H. Jonas, H. G. Morris, E. D. Till, E. Walker, T. I. Weston, F. B. White, and the Secretary. Apologies for enforced absence were read from Messrs. P. Scattergood and C. N. White.

The minutes of the previous meeting were read and confirmed.

Three new members were elected, viz. :—

Edwin Adamson, High-street, Yarm-on-Tees.

G. Bennett, Sketchley Farm, Hinckley.

James Kerr, Milldamhead, Dumfries.

On the motion of Mr. Jonas, seconded by Mr. Harris, Mr. Cowan was unanimously re-elected as chairman of the Council, and Mr. T. I. Weston to the vice-chairmanship for the ensuing year.

The finance committee's report, presented by Mr. Jonas, gave a summary of the receipts and expenditure during the past month, the balance to the credit of the society on May 14 being £89 2s. 5d.

Mr. Weston reported that the guarantee forms to be issued as receipts for insurance premiums were in preparation, and, on his recommendation, the insurance committee's proposals were unanimously approved.

The Secretary made a statement in regard to the entries for the "Royal Show," which, in view of the unfavourable season for honey production, was considered satisfactory.

Nominations were made of judges to officiate at the "Confectioners'" and "Grocers'" Exhibitions respectively, and the prize schedule for the honey department of the Dairy Show was revised for approval by the British Dairy Farmers' Association. The Secretary reported that in an interview with the Baroness Burdett-Coutts (President), her ladyship had been good enough to promise £10 towards the prize fund. A proposal that a Coronation Challenge Cup should be offered for competition at the Dairy Show met with great favour, and was approved subject to endorsement by the authorities. It was decided to make an appeal in the BRITISH BEE JOURNAL for further donations.

Messrs. W. H Harris, E. D. Till, and T. I. Weston were appointed as a Sub-Committee to revise the matter for inclusion in a new edition of "Modern Bee-keeping," with power to take such steps as may be necessary to expedite publication. Mr. W. Broughton Carr and Mr. W. F. Reid kindly agreed to act as corresponding members of the Sub-Committee.

Mr. L. L. Jacobs, an aspirant for the first-class expert certificate, attended the Council and delivered an impromptu lecture in support of his candidature.

Certain letters addressed to the Council were read to the meeting, but it was decided that no action be taken thereon.

The next meeting will be held on Thursday, June 19.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

****** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

WARWICKSHIRE NOTES AND ECHOES.

[4779.] The expert's lot is not at all times a happy one. Especially does this remark apply when he experiences such weather as that which has prevailed so far through this month of May. He waits and watches for finer and warmer weather, and on the first morning that a less keen wind is blowing or a little more sunshine is promised (and knowing that the bees are generally to be found in a sheltered corner of the garden) off he goes with his "bike," telling the good wife to expect him home again when she sees him, and journeys, perhaps, to some distant part of the county, to be driven home again after an hour or twos'

work among the bees in the soaking rain, or chilled to the very core by the biting wind. He may be fortunate enough to be sheltered and hospitably entertained by the owner of the bees (he gets heaps of kindness shown to him), or he may have to seek shelter at a wayside inn or by creeping into a tool-house, stable, or cowshed. And when he is doing his level best to get on, not only for his own sake, but also for the sake of those members yet to be called upon, he gets grumbled at sometimes for calling late or for not bringing more genial weather with him. And yet the remark is often made to him, "What a pleasant life yours must be!" But is this suitable matter for our BEE JOURNAL, Messrs. Editors? Let it be my excuse that it is penned (or rather pencilled) in an aforesaid toolhouse during a three hours' enforced "rest."

And what of the bees? Well, I have found them the last fortnight at a standstill—or worse; even where feeding has been going on the immature drones have in some instances been cast out in large numbers, and so many of the adult workers have left the hives never to return, that there has been no increase in the strength of the colonies. And where food has not been given, whole colonies dead on the floor-board or buried head-foremost in the cells, or else a complete cessation of brood-raising, as disastrous to the chances of getting honey this year as the former condition. When will bee-keepers learn the necessity of feeding according to the weather, or the needs of the bees? Many discontinue it on a certain fixed date, or when the fruit-blossom appears, generally at the same time removing all winter packing, or, worse still, putting on the supers!

This is the darkest side of the picture, Messrs. Editors. There *are* hives crowded with bees only waiting for fine weather to crowd up into the supers and give a good account of themselves. May it soon come!

Why are so many queens lost during the winter and spring months? We know, of course (or can guess), the why and wherefore in some cases, but queens are lost when they are not old—when there has been no manipulation of the hive, no lack of food, of bees, or warmth. I am much puzzled at times to give the definite answer that is expected to the question, "What has become of her?"—GEO. FRANKLIN, *Kenilworth, May* 17.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Revue Internationale d'Apiculture.—Melliferous flora of Canada, extracted from a report of the Entomologist and Botanist of the Government Experimental Farms, Canada:—

April.—Snowdrops, scilla, maple (two varieties), willow (two varieties), dandelion.

May.—Tulips, plum and pear trees, wild cherry, hyacinth, daphne, periwinkle, anemones, Alpine poppy, pheasant's eye, daronicum, dwarf cherry, currants, lilacs, Jacob's ladder, peony and iris, honeysuckle, barberry, mountain ash.

June.—Strawberry, buckthorn, forget-me-not, maples, rhubarb, centaury, bugle (ajuga), white Dutch clover, alsike clover and sainfoin, raspberry and blackberry, lotoneaster (two varieties), alliums, rose, spirea (two varieties), laburnum, geraniums, wild vetch, large red poppy, potentilla, lupin, wild mustard, fraxinella, acacia, horse bean, campanula, bugloss (anchusa).

July.—White melilotus, asparagus, field pea, vetch, sedum, thalictrum (wild rue), lime, lilies veronica, mullein, woodruff, flax, asclepias, agrimony, mignonette, St. John's wort, echinops, lychnis, golden rod.

August.—Late beans, pumpkins, campanulas and rudbeckias, sunflower.

September.—Wild asters, marigolds.

October.—Gaillardias.

L'Apicoltore (Italy).—An interesting attempt has been made to spread the practice of bee-keeping among the officials of the various railways in Austria. Taking into consideration the moral benefit as well as the material advantage, and the adding a pleasant interest to the lives of railway employés. Two years after the introduction of bee-keeping along the Austro-Hungarian lines many of the men had six, eight, and in some cases as many as twelve hives. A circular addressed by the inspector-general to the employés offered to provide a bar-frame hive, well stocked, to any of them wishing to keep bees; also an extractor and wax-melter to be sent to the men in turn by the railway administration. Other equally liberal offers were made. To help the men in the sale of their honey, the providing all needful appliances at the lowest possible cost; distributing popular directions on bee-keeping; and providing amply for instruction on the subject.

Elsass-Lothringischer Bienen Züchten.—An excellent remedy for severe catarrh is a tisane of the common millfoil, or yarrow and honey. At the beginning of the cold the patient should drink a large cup of yarrow tisane with a teaspoonful of honey dissolved in it, and the cure is soon accomplished.

It is good for weakly, pale children and young people as a permanent beverage.

The Same.—In Dürlisheim, Elsass Lothringea, in 1901, eight hives yielded about 1½ cwt. of honey, but only one swarm. The owner, however, added three other swarms in a curious way. Working among his vines on a lovely May morning, he found a strong swarm of bees hanging in a vine. Lighting a cigar, he collected them in his apron and carried them home, where they were successfully hived. A second swarm was found under the floor of a garden house and was safely dug out; while the third was discovered

in a hedge of wild roses. They have all developed into fine healthy colonies.

L'Apiculteur, France.—Many observers have described the existence (sometimes in great numbers in some hives) of bees with partially-developed, crumpled, or even entirely atrophied wings. An observant bee-keeper (at Monceaux) says that these bees are often found on the ground before the hives, from which they are pitilessly excluded by the workers. As to the cause of the malformation of the wings, it is thought to be brought about by the chilling of the cells containing the young brood. Also apterous bees are said to be more numerous in weak hives. More information on this interesting subject would be gladly welcomed, and any bee-keepers' observations on this point would be gratefully acknowledged.

Die Deutsche Bienenzucht.—Statistics from Würtemberg. Information from the Würtemberg Board of Agriculture, January 9, 1902. The number of hives in the different districts is as follows :—

Weekar Kreis district.....		125,770
Black Forest	,, ...	35,605
Jagst	,, ...	39,060
Danube	,, ...	50,551
Total.....		150,886

There has been an increase of 34,691 hives since 1892. The total honey harvest in 1900 (excepting what was used in wintering the bees) was 1,057,974 kilo. ; that in the old skep hives amounted to 212,188 kilo. ; that in frame hives to 845,786. Truly a cause for satisfaction to the Swavian bee-keeper.

Leipziger Bienen Zeitung.—A bee-keeper near Carlsruhe describes a giant sunflower from Russia which has given wonderful results, both as to the production of seed (which yields a fine salad oil) and also as bee pasture it is excellent, giving honey the whole day long. Each flower produces from 2,500 to 3,000 seeds.

Rucher Belge from Revue de Noyon.—A cheap apifuge. It has been remarked that bees have a great aversion to the smell of naphthaline. The following mixture has proved a perfect protection to ungloved hands in manipulating even the most irritable bees :—Take two parts of vaseline, and melt in a bain marie ; then mix well with it one part of naphthaline in very fine powder. Rub on the hands before manipulation, which can then be undertaken without fear.

Elsass Lothring B. Züchter.—The question as to whether bees attack ripe grapes has been often discussed, and a recent writer says :—"My hives are surrounded by vines, and the neighbours were disposed to accuse the bees of taking the ripe fruit. The following experiments prove that bees are perfectly harmless in this respect :—On September 25 we placed before the hives (which had not much honey at the time) twenty-eight varieties of grapes, perfectly ripe and sound, and not one bee even settled upon them. The next day they were sprinkled with honey-water, and at once they were eagerly visited by the bees, and the sweet fluid was all sucked up, but not a berry was injured. On the 29th the grapes were changed, and the fresh ones were sprinkled as before, and a few grapes in each bunch were pricked with a fine needle. By midday the bees had taken the honey-water and devoured every punctured grape. Next day ten more berries on each bunch were pricked and emptied by the bees, but the sound grapes remained untouched. The experiments were conclusive, and the neighbours had to confess that bees never injure sound fruit."

Bulletin de la Société d'Apiculture de la Tunisie.—In May most of our enemies make their appearance. The most troublesome and best known are :—

The common wasp.

The philanthus, which subsists entirely on bees. It resembles the wasp, but is longer, and the abdomen smaller. It is of a bright yellow colour, with black bands.

The thistle bug, a black beetle of some size, will get into the hives, and gorge itself with honey.

The Death's-head moth will also introduce itself into the hives, and eats large quantities of honey.

The wax moth, of which there are two varieties, and which in ill-kept and neglected hives will soon cause their utter ruin.

Spiders, which must not be permitted to spin their webs near the apiary.

Ants are very fond of honey, and often make great havoc in the combs. The best way to exclude them is to paint the legs of the stand with petroleum or place them in vessels of water.

Lizards and tarantulas hunt the bees on the ground.

And the beautiful *bee-eater* is a dangerous enemy. The best way to get rid of them is to frighten them away with the noise of a gun. As they are entirely insectivorous it would not be right to destroy them.

Swallows also must not be encouraged to nest near the apiary.

L'Apicoltore.—There were very few swarms last spring and summer either in Italy, France or Germany, Belgium or Switzerland, and it seems difficult to account for it, as though there were intervals of rainy and windy weather, still the honey harvest was remarkably good. It is thought that when the spring is favourable and much pollen is brought in, and a strong brood raised, so that the colony has reached its full development by the time of the honey flow, the bees give all their energies to collecting stores, and do not swarm. But if, on the contrary, the flowering season is late and the great masses of bees do not find enough to employ their activity, the instinct is to divide, and swarming takes place, and the largest hives will not hinder. These are some reasons for the few swarms of last season.

Queries and Replies.

[2851.] *Size of Various Frames in Use.*—In BEE JOURNAL of February 20 (page 71) you published diagrams of the various sizes of frames in use in this country, comparing them with several American frames. 1. Will you kindly inform me if the measurements given are *outside* of frame or just the comb space only? I ask because I am thinking of trying the American "Quinby" frame for this district, as I have one hive holding eleven frames, nine of which are now covered with brood, and also on each outside frame from top to bottom and side to side. 2. I should also like to ask if any of your readers can inform me how to construct a good slide for hive entrances, as I do not use porches, nor do I believe in them. Your valued help will greatly oblige.—FUMIGATOR, *West Hartlepool, May* 16.

REPLY.—1. The measurements given are in all cases to *outside* of rectangle. If it were otherwise, the dimensions shown would obviously be of no use whatever in providing the proper space between frames and hive-sides, or between bottom-bar of frame and floor-board. 2. You had better use the loose slides that do not work in grooves.

[2852.] *Deposing Prolific Queens.* — In looking through my bees recently I found one queen two years old, with her wings very much jagged, as if she was getting "aged and worn-out." But this same queen did splendidly last year, and has now seven standard frames nearly filled with slabs of brood. I therefore ask: 1. Do you advise me to re-queen the stock, or let her remain for this summer? 2. Kindly say in next issue if the enclosed queen-bee has been fertilised? I might say I have taken the BEE JOURNAL for three years past, and it is one of my greatest pleasures. In reading it I have many times wanted to know something about my bees, and, sure enough, I often take up the paper and find in it the very information I want. —A. B., *Barford St. Martin, near Salisbury.*

REPLY.—We should on no account re-queen the stock till the close of the present honey-season—say, end of July. Are you quite sure the queen is so old as stated? We ask this because appearances are often deceptive, and a queen so very prolific as the one in question seems to be is worth preserving so long as the results are so good. 2. The queen sent is a well-developed adult bee, and has assuredly been fertilised.

[2853.] *Dead Queen Cast Out.*—Would you be so kind as to tell me about this queen in next issue of B.J.? I found her cast out of one of my strongest hives to-day. I therefore ask: 1. Is it the old one? 2. Or is she a virgin? 3. Is there anything I can do in the way of examination of the hive, or by re-queening? About three days ago I received a nucleus colony of Italian bees. They were hived beside the hive which has cast out this queen. I suppose she is what you call a black bee, not the Italian? Some of the new-comers have been trying to get into the latter instead of their own hive, and have been turned out dead very quickly. 4. Has this had anything to do with the killing? With thanks for all kind help in the past.—F. HAMSHER, *Cuckfield, May* 16.

REPLY.—1. The dead queen received is, we fear, the mother bee of the stock from which she was cast out. Only an examination will definitely decide the point, but the queen in question is not an Italian. 2. She is certainly not a virgin. 3. If the stock is now rendered queenless, as inferred, the bees will have started queen cells, and it is for yourself to decide whether you will give the bees a good laying queen instead of allowing them to re-queen themselves. It will certainly tend to increase your take of honey to introduce a good queen at once. 4. Very probably the inroad of alien bees into the stock of natives may have been the primary cause of the mischief, seeing how slight an upset in spring will sometimes result in "balling" of the queen of a strong colony.

[2854.] *Freeing Foundation from Larvæ of Wax Moth.*—Some comb foundation that has been lying by me for some time has now got moths' eggs in it and has become "webby" externally, but the sheets of wax are not penetrated in any way. 1. What shall I do with it before using? Would No. 12 solution (1 oz. carbolic to 12 oz. water) be safe to use? I got two stocks in November, very strong ones. The expert reports that they are free from disease. It was very cold when he called, and I find, on putting the bees into new hives, that the old hives have grubs in the cracks, and the timber is slightly gouged out by them. I suppose these grubs are partly wood-eaters. 2. Will No. 12 solution, followed by boiling water, kill them? 3. Is "Jeyes' perfect purifier" ever used for hives? Canary breeders use it in solution to paint cages. 4. Some sections of drawn-out foundation have a few moth eggs and webs in them. Must they be melted down?—ADVICE, *Stockport, May* 15.

REPLY.—1. Carbolic acid should not be used about comb foundation, it will give the bees a distaste for working on it. Moths' eggs and also anything "webby"—as your term has it—can be easily removed by a soft brush, and nothing more is required before using. 2. It is evident the old hives in which the stocks referred to were infected with the small wax-moth (not *Galleria cereana*), a fact which does not quite bear out the idea of the stocks being "very strong ones," because bees, when very strong, usually manage to keep their hives free from the pests mentioned. Anyway, the latter must be got rid of by brushing away or killing the moth larvæ by hand, not by applying solu-

tions or disinfectants as proposed. 3. All sorts of "purifiers" and disinfectants—good, bad and indifferent—are used by bee-keepers as we suppose they are by bird fanciers. 4. If badly infested melt them down; if slightly so, let the bees deal with them. They will soon get rid of the moths' eggs, but the moth "web" is a bit beyond their powers.

[2855.] *Moving Bees Four Miles.*—I purpose removing a stock of bees a distance of four miles in about a week. Would you kindly say in the next issue of the B B J. if it would be any disadvantage to do so? Would the mere fact of removal to a strange locality now interfere in any way with the honey prospects from this stock?—S. B. CLARKE, *The Manse, Cairncastle, Larne, May* 16.

REPLY.—Provided always that the bees are properly packed for the journey; and so carefully carried as to arrive at their new location without damage of any kind, it will be rather advantageous than otherwise to remove them on to fresh ground. Our personal experience fully proves that it tends to impart increased vigour to the working energies of a colony of bees when they find themselves in "fresh fields and pastures new."

[2856.] *Utilising Diseased Lots of Bees.*—Would you be good enough to favour me with your advice in the following circumstances:—One of my hives has, I regret to say, become affected with foul brood, some of the cells containing the dead brood with the cappings perforated. There are ten frames in the hive fairly crowded with bees, and the combs are full of brood in all stages, much of which hatches. It seems a pity to have to destroy so much brood, but I should certainly do this and put the bees in a fresh hive on new frames if you think such a course desirable. I have this week destroyed another weak stock similarly affected. I should feel grateful if you would be kind enough to let me have an early reply.—E. W., *Tavistock.*

REPLY.—We regret you did not forward a sample of comb from the hive in question, because the expediency or otherwise of trying to save diseased bees largely depends upon the length of time the colony has been affected with foul brood. If the disease is of very old standing, we should not advise trying to utilise the bees. On the contrary, if a recent outbreak, the chances of saving the bees without risk of spreading the disease are very favourable at this season.

[2857.] *Helping Cottagers in Dealing with Foul Brood.*—I am enclosing a small piece of comb for your verdict as regards disease. I am doing this for a fellow cottager who keeps bees about 100 yards from me. I have eleven stocks myself, and he asked me to have a look at his, and I am not satisfied with the appearance of the combs, so I have enclosed a piece cut from one of my friend's hives. All are affected the same. It seems to tally with what is said in the "Guide Book." The larvæ is not "plump and pearly white"; some are getting smaller, while others have turned out of the natural position in the cells, and I see some few are turning yellow, but I cannot find any resembling the "coffee-coloured mass." I notice, however, that some of the cell-cappings are perforated. I might say that all his stocks are weak, and he has had no swarms for several years past. The bees of all the five lots I suspected would only make one decent stock. He seems very willing to do anything that would make them prosper. I myself have offered to give him a hand if you think the comb is affected. I am thankful to say I have not noticed any in my own, but I medicate all food, and keep naphthaline in the hives, and I am looking for your answer with fear for myself as for him, and if you will please put the answer in the B.B.J. you will oblige my friend and also one, myself, as a SIX YEARS' B.J. READER, *Isle of Wight, May* 12.

REPLY.—Foul brood is only just developing in comb sent. It is, therefore, a favourable case for treatment. The five lots of bees would make up a good stock, and, as you already possess the "Guide Book," there is no need to give you any directions here with regard to utilising the bees.

[2858.] *Removing Bees.*—I shall be glad of your advice in the next issue of B.B.J. as to the following:—Finding it necessary to remove a stock of bees about 100 yards, I have taken them into the country some two or three miles, and would be glad to know how long it will be before I can bring them to the 100-yards spot from where they originally stood? This has not cropped up before in my bee experience, and will greatly oblige.—C. H. CLOUGHTON, *Maldon, Essex.*

REPLY.—The bees may be removed any time without loss.

BUILDING UP COLONIES IN SPRING.

The past winter has been a serious one for us, and from my correspondence I find it also has been so in other parts, involving quite a loss of bees, and I am receiving inquiries regarding the feasibility of a rapid increase in order that the combs from the lost colonies may be stocked with bees again, as quickly as possible, I therefore propose to give a full answer in the *American Bee Journal* as follows:—

After trying everything I have ever heard of for rapid increase I prefer the nucleus-box plan to any other, for the purpose. To carry out this building-up process, all want one or more boxes similar to the shipping-cases used in marketing section honey, only having wire-cloth sides in place of glass, and a hole in the top which will admit a large funnel,

such as is used in putting up bees by the pound. This hole should have something like a door to close it with easily, and one of the wire-cloth sides should be tacked to small wooden strips, like a slate frame, and thus made easily removable.

As early in the spring as you can do so without loss by cold spells, begin to stimulate your strongest colonies by spreading the brood and feeding, so that one or more of them may swarm early, thus giving you queen-cells; or, what is still better, have queen-cells built, by the plan given in my book, "Scientific Queen-Rearing," so that you can have plenty of queen-cells to use as you wish, unless you prefer to purchase queens. Having the queen-cells nearly mature, or having queens on hand by purchase or otherwise, go to any colony that can spare bees without damaging their building up as fast as you desire, and take out two frames having about a half-pound of bees on them, taking care that the old queen is not on these combs. Set them down in an empty hive, and tap gently on them so as to cause the bees to fill themselves with honey; then shake them down through the funnel into the box, removing the funnel and closing the door or hole.

Having the bees in the box, return the combs of brood to their hive, marking the one having the most emerging brood so you can get it in a moment when wanted. Now set the boxes of bees in a cool place, where little light will reach them, and leave them till near night, just time enough so you can finish your work before it is dark.

At the right time—a little after sundown—go to the hive from which you took the bees, take the marked comb, shaking the bees from it in front of the entrance, and put a frame of comb from which the bees have died in its place. Now take the comb of brood and a frame of honey from the dead colonies, and place them in a hive where you wish a colony to stand, putting in a division-board so as to make a small hive for the two combs. Now go to the hive having queen-cells, and, taking one of them, fit it into the comb having brood, placing it near or at the upper edge of the brood, where it will be warmest. Next close the entrance to the hive. Get the box of bees, and put it with the funnel-hole next to the combs. Then open the door over the hole, and if the box is within ⅝ in. of the brood the bees will immediately run out of the box on the combs.

As soon as they begin to run out, close the hive, and leave it so till the next morning, then open an entrance large enough to admit three or four bees at a time, on the opposite side from where the two combs stand. Then towards night of the same day, take out the box and adjust the division-board, when you have a nice nucleus colony started in that hive.

As soon as the young queen from the cell given gets to laying, you are ready to insert the combs from the dead colonies till the hive is filled, giving the combs, one or two at a time, as fast as the bees can occupy them.

In the above I have given the way of making one little colony, and you can make as many and as often as you have stocks that can spare the bees, and queen-cells to give them, using about half a pound of bees for each colony made during the month of June, one pound during July, and two pounds during August. Where we have plenty of combs to use, there should be no trouble in making ten colonies from one old one in the spring, if said colony has wintered fairly well.

If you prefer to purchase instead of rearing queens, proceed as above, but, instead of putting the bees in the hive at night, place the queen in a provisioned cage, go to the box of bees, and, by setting it down suddenly on the floor, drop all of the bees to the bottom; quickly open the door and hang in the caged queen, so that the bottom of the cage nearly touches the top of the box. Leave the bees till next morning, the hive fixed as before, less the queen-cell; and, instead of opening the funnel-hole for the bees to run out of it, the movable side is taken off, and the bees hived like a swarm, releasing the queen from the cage so she can go in with them.

In this way I have made hundreds of little colonies and nuclei, and there is nothing that pleases me anywhere nearly so well for the purpose as this. But, if any one thinks otherwise, then let the colonies left after a bad winter, swarm as fast as they will, and six days after a swarm issues from any hive, divide the old colony into nuclei, using two combs with bees, brood and a queen-cell to start a separate colony, and build up these nuclei with the combs not occupied with bees, the same as by the first plan, after the young queen is laying. In this way I have succeeded in making from five to six good colonies by fall from one good colony in the spring, and in good seasons obtained quite a little surplus from the new swarm.—G. M. DOOLITTLE, in *American Bee Journal*.

THE POETS' BEES.

Collated by "F. E. I. S."

No. 4.—SHELLEY.

And hither come, sped on the charmèd winds,
Which meet from all the points of Heaven, as bees
From every flower aërial Enna feeds.

* * *

Bees, keep your wax; give us the honey,
And we will plant while skies are sunny
Flowers which in winter serve instead.

* * *

The meadow with fresh streams, the bees with thyme,
The goats with the green leaves of budding spring
Are saturated not—nor Love with tears.

A drone too base to have a sting,
Who gluts and grimes his lazy wing
And calls lust "luxury."

* * *

Honey from silkworms who can gather,
Or silk from the yellow bee?

* * *

But the bee and the beamlike ephemeris,
Whose path is the lightning's, and soft moths that kiss
The sweet lips of flowers, and harm not.

* * *

Her feet ever to the ceaseless song
Of leaves, and winds, and waves, and birds, and bees,
And falling drops moved to a measure new, yet sweet.

* * *

Were not the crocuses that grew
Under the ilex tree
As beautiful in scent and hue
As ever fed the bee?

* * *

The sweet child Sleep, the filmy-eyed,
Murmured like a noontide bee:
Shall I nestle near thy side?

* * *

Daylight had awakened all things that be,
The lark and the thrush and the swallow free;
And the milkmaid's song, and the mower's scythe,
And the matin bell, and the mountain bee.

* * *

The wind in the reeds and the rushes,
The bees on the bells of thyme,
The birds on the myrtle bushes,
The cicale above in the lime.

* * *

The clearest echoes of the hills,
The softest notes of falling rills,
The melodies of birds and bees,
The murmuring of summer seas.

No. 5.—Campbell.

The Swedish sage admires in yonder bowers
His winged insects and his rosy flowers.

* * *

Aërial notes in mingling measure played
The summer wind that shook the spangled tree,
The whispering wave, the murmur of the bee.

* * *

'Twas transport to inhale the bright, sweet air.
The mountain-bee was revelling in its glare,
And roving with his minstrelsy across
The scented wild weeds and enamelled moss.

Star that bringest home the bee,
And sett'st the weary labourer free.

* * *

And murmuring tribes from me derive
The ambrosial amber of the hive.

* * *

Unheeded spreads thy blossomed bud
Its milky bosom to the bee.

* * *

With all thy rural echoes come,
Sweet comrade of the rosy day,
Wafting the wild bee's gentle hum,
Or cuckoo's plaintive roundelay.

* * *

Oh, I bring these heartless, hapless drones
Down in a trice on their marrow bones
To call me king and lord.

CONTRIBUTED ARTICLES.

I have lately been reading reports of foul brood, and of the number of colonies treated in different States by a number of foul brood inspectors. The last in my hands is the Colorado report, made to the Secretary of the State Association by a number of county inspectors, and published in the *Rocky Mountain Bee Journal* for January, 1902. These reports make me feel very much behind the times, for after some thirty-three years of active bee-keeping, and a good portion of the time on a large scale, I have yet to see the first case of foul brood, not only in our own yards, but also in any yard that I have visited from time to time. My father, whose experience goes back some twenty years farther, also says that he has never seen a case of foul brood. It is true that we have had occasionally, especially in early spring, a case of dead brood, generally caused by spring-dwindling, or by the desertion of the bees, but this accidental dying of brood was easily ended by the prompt burying of the dead brood, which removed all danger.

But here is a report that astounds me. According to this report, in the State of Colorado in 1900, out of 7,952 colonies inspected, 799, or a little over 10 per cent., were found diseased. In 1901, out of 13,131 colonies inspected, 804 were found diseased, or a little over 6 per cent. Just think of it!

I take it for granted that not all the bees in those counties were examined, for that would be a terrible condition if that per cent. of all the bees were infected with foul brood. But the report does not say anything about the probable number of colonies in the country, and we are led to infer that the number mentioned covers all the bees in that portion of the country. It seems to me that a more detailed statement ought to be published. For instance, the report ought to state in how many apiaries the disease is found, where they were

located, how many apiaries were found immune; and, if any apiaries were not examined, how many of these, and the reason why they were not examined. The probable number of colonies in the State ought to be embodied in the foul brood report, so that strangers reading such a report may not be led to believe that this contagion is spread all over the State.

The reason that prompts me to ask this, is that the plain report, as printed in the journal, will give foreigners a very bad idea of the condition of bee-culture in the States where such reports are printed.

It seems to me that it would be well, also, that the localities where the disease is raging with the greatest vehemence be mentioned in the report, so that bee-keepers should avoid buying bees, or honey for feeding, from those localities *until the disease has been conquered.*

A contagious disease should be treated as all contagions are—by a prompt and effective quarantine. This quarantine will be in the interest of the affected apiaries themselves, because it is necessary that the disease should be confined in as small a space as possible.

This is very much like battling with small-pox. Our little town was invaded by that dread disease last November. Just as soon as it was detected, the facts were published by the Mayor; the houses of the sick were quarantined, and the public houses were closed. The town put itself under strict quarantine for some forty days, and at the end of that time the disease had disappeared. In a neighbouring city they kept the light under a bushel, for fear of losing trade, and the result was a much longer and much more extensive siege of the disease.

But while we are carefully guarding against foul brood, let us not be hasty in declaring the existence of foul brood at the first sight of a cell or two of dead brood. Foul brood is a special disease, which has been described often enough to make everybody familiar with it, and when a case of dead brood is found, one ought to make absolutely sure that it is a case of malignant foul brood before resorting to the extreme measures which foul brood demands.

At two different times in my experience I have had samples of dead brood sent me by bee-keepers who thought they had the dread disease in their apiaries, and in both cases I had the pleasure of informing them that I did not believe that the disease was the true contagion. In both cases the subsequent disappearance of the disease proved that this was correct.

But in the modern methods of rearing and shipping queens all over the country, there lies a great danger, and, for that reason I believe that the State inspectors, after making absolutely sure of the existence of the disease in a locality, ought to publish the fact in their report. After the disease is cured, it would be their duty publicly to mention that fact also. Can we not hear from some foul-brood inspectors in regard to this matter?—C. P. DADANT in *American Bee Journal.*

PRESS CUTTING.

WHAT NEXT?

An electric contrivance has been invented which obviates the necessity of keeping a watch on bee-hives at swarming time. The basis of the apparatus is the conversion of the wing motion of the swarm into power. As the bees swarm out they cause two small, easy swinging doors to open outward. A little metal hammer, which rests upon these doors when closed, and is connected with a battery, drops, as the doors swing open, upon a small metal leaf, and the electrical circuit thus completed rings a bell in the bee-keeper's house.—*Cassell's Journal, May* 14.

TRADE CATALOGUES RECEIVED.

DAVID RAITT, *Celtic Works, Blairgowrie, N.B.*—Mr. Raitt, in sending out a re-issue of his capital catalogue, includes nearly every up-to-date appliance known to bee-keepers, besides a good many useful things for amateur joiners. He this year also encloses a neat and well-illustrated list of pure-bred poultry (kept on his own runs), and eggs for hatching, along with pieces and sizes of poultry-houses, incubators, &c., all of which are priced very moderately indeed.

EDWD. J. BURTT, 24, *Stroud-road, Gloucester.*—This is a neat 32-page list for 1902, and, as usual, we find Mr. Burtt's special make of hives retain their old well-earned places. Not to be behind, however, a few nice tone-blocks are added to the illustrations of former years, including one of the machine shop with saw-benches, planers, &c., which accounts for the importance of Mr. Burtt's trade in boards, cut and planed to size for bee-keepers' use. It is altogether a neat and useful list.

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries closed.**

July 5 to 9, at Carlisle. "Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 17 and 18, at Boston Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with

the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Thirteen classes, with liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 18.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22, Leam-street, Leamington. **Entries close July 31.**

August 7th, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. *Entry free.* Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 4.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

C. REED (Wickford).—*Bees Dying Off.*—We have been at some trouble in endeavouring to find out the cause of bees dying off as stated, and as there are no apparent signs of disease in dead bees forwarded, we only suppose the mortality to be due to wet getting into the hive from above the frames. The bees had all the appearance of being drenched with moisture if not drowned outright. We should examine the hive in view of what is said above and see if we are right in our conclusions.

F. MATTHEWS (Cambs.).—*Joining County Association.*—The hon. secretary of the Cambs. B.K.A. is Mr. C. N. White, Master, Union House, St. Neots.

E. K. H. (Brondesbury-park, N.W.).—*Helping Bee-keepers.*—We have forwarded your letter to "Mot," Willesden Green, as requested.

F. EVANS (Market Drayton).—*Willesden Paper for Hive-Roofs.*—A letter addressed "The Willesden Waterproof Paper Company, London," will no doubt reach the firm in question.

B. J. (Aylesbury).—*Brass Wire for Honey-Strainer.*—There is nothing detrimental in using brass wire-gauze for straining honey.

C. T. E. (Chadlington).—*Postage of Press Copy.*—If sent in an unsealed envelope and marked on outside "Press Copy Only," MS. for publication will go at book-rate, viz., 2 oz. for ½d. stamp.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

R. MORGAN (Glam.).—Both samples are badly affected with foul brood. Since the stock from whence No. 2 sample was taken is strong in bees, "has eight frames full of bees," and you are desirous of trying to utilise them, we advise you to follow closely the directions given in "Guide Book" (which you already possess). We cannot be responsible for anything said by other writers on the subject, and it goes without saying that our own views as regards what is best are expressed in the book referred to.

G. M. L. (Cardiff).—Comb is affected with foul brood. We make no charge for wiring replies beyond 6d. for cost of telegram.

T. HAWKINS (Chesterfield).—No disease in comb sent.

P. L. F. (Leeds), A. R. (Acton), and J. H. (S. Devon).—All three samples are bad cases of foul brood of old standing.

W. HULME (Burton-on-Trent).—Comb contains chilled brood only; no disease at all in comb forwarded.

B. M. P. (Chelmsford).—The small piece of old drone-comb sent has no trace of brood in it, either foul or otherwise. Comb-like sample should be burnt as utterly useless in the hive.

M. I. A. (Symington).—Foul brood rapidly developing in comb sent.

T. S. (Guinear).—A bad case of foul brood.

Editorial, Notices, &c.

STAFFORDSHIRE B.K.A.

ANNUAL MEETING.

The annual meeting of the Staffordshire Bee-keepers' Association was held in the Lecture Room at the County Technical Building, Stafford, on Saturday, May 3. Mr. W. G. Bagnall presided. The balance-sheet showed that the year's deficit was £14, the amount of the loss on the show at Newcastle-under-Lyme. The chairman said that if all the members had paid their subscriptions the accounts would have about balanced. The report showed that there were 169 members on the books. Mr. A. H. Heath was re-elected President, and Mr. W. G. Bagnall, vice-president. The retiring committee were re-appointed, and Lord Harrowby and Mr. R. P. Cowper were added to the list of patrons. Mr. Cock was re-elected expert, and the Rev. F. C. Bruton, vicar of Great Haywood, was elected honorary secretary and treasurer.—(*Communicated.*)

YEOVIL AND DISTRICT B.K.A.

A meeting was held at Hendford Manor Lodge on Thursday evening to consider the advisability of forming a Bee-keepers' Association for Yeovil and the neighbourhood. Dr. Farland was voted to the chair, and the attendance numbered between twenty and thirty. The advantages of such an Association, which were placed before the meeting, were those of buying appliances wholesale and supplying them to the members at cost price, the use of an extractor, expert advice, members being able to show their honey and find a market for the same, insurance, and being able to take combined action in matters which affected bee-keepers in general. After some discussion it was resolved that an Association, to be called "The Yeovil and District Bee-keepers' Association," should be formed, and the following officers were chosen:—Joint Secretaries, Mr. Everton Watts, Mansion House, Yeovil (who was also elected Treasurer), and Mr. G. W. Perry, 81, Middle-street, Yeovil; Committee, Messrs. V. F. Thring, J. Webb, Trew, Dicks, Hooper, and Cook, with power to add to their number. A number of Vice-presidents were also appointed, and the Association will be affiliated to the County Association. The meeting closed with a vote of thanks to Mr. J. B. Paynter for lending the room, and to the Chairman for presiding.

The Hon. Secretaries write to say they will be glad to hear from bee-keepers in the district covered by the Association who are desirous of joining with whom they are not already in touch. The area covered by the new B.K.A. is that included in the Yeovil Union.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department—reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4780] *Ancient Bee-keeping.*—"That great husbandman, Mr. Carew, of Anthony, Cornwall," advised hives to be stocked as follows: The body of a steer one year old was to be buried for about ten days. "Then take it forth of the earth and, opening it, lay it under some hedge or wall where it may be most subject to the sun, by the heat whereof it will turn into maggots. After a while, when they begin to have wings, the whole mass should be carried to the place where the hives stand ready, to which, being perfumed with honey and sweet herbs, the maggots, after they have received their wings, will resort." The device is as old as Virgil, who, in his fourth Georgic, gives us a lengthy description of the *magic* change:—

> "Till, shooting out with legs and imped with wings,
> The grubs proceed to *bees* with pointed stings."

The price of the "sturk or steer" deters me from practising the experiment, even though Mr. Carew advises it *after trial*, and purveyors of swarms need not fear that their "occupation is gone." I notice that the advertised price of swarms is coming down, possibly to keep in touch with the reduced price of the product they supply us with. A few years ago retailers rarely offered them under 3s. 6d. per lb., now 2s. 6d. is quite a common price. Purchasers should never invest in swarms where they are not guaranteed to weigh so many pounds of bees. When are we to get a vendor who will advertise that an ordered 4 or 5 lb. swarm shall weigh that number of pounds on its arrival, after a journey of, say, two days? *He* only loses from 10 to 16 oz. cheap honey. *We* lose at present that number of ounces of dear bees.

When to Place on Sections.—White clover starts blooming with us early in June; but it is seldom in good form until after the middle of the month. Bees have been increasing steadily for the last two or three months, and generally a stock in good heart will show all but the outside combs one mass of brood or eggs. Often till well on in the month, how-

ever—especially at any altitude above sea-level—the nights are yet chilly; and any enlargement of the internal space causes a vacuum serving no good purpose, as it reduces temperature just when the young brood requires a high degree of heat to secure its successful development. Many err here by over-haste in putting on supers, and check the progress of the colony by chilling a proportion of the young brood lying on the outer edge of the cluster. Bees at this early date are all required for foraging, or to keep up the internal heat, or tend on the larvæ. All their energies being thus employed, it is a fatuous policy to give them more room when they have as yet nothing to store. Every ounce of honey yet obtainable is required for the rising generation. After a period of settled warm weather, however, if a peep is taken at the outside frames, a white rim of fresh comb may be seen along the upper cells. This is a sure index that storing has begun, that the bees are willing to build comb, and that further space may be given with some reasonable expectation that it will be appropriated. *Then* is the time to place on the supers, and no time should be lost in doing so, and thereby guarding against a new danger, as bees, finding themselves cramped for room, begin at once to make preparations for swarming, and our aim now is to check any such thoughts.

"*Heroes and Gentlemen.*"—This is the name of a new book on the South African experiences of an Army chaplain well-known in the bee-keeping world, Rev. Robert McClelland, the Manse, Inchinnan, Renfrew. He will be remembered as a frequent contributor to our pages a few years ago. The book has many intrinsic merits of its own certain to push it well to the front even amid the countless works on the same subject rapidly being issued from the Press, but the fact of its being written by an enthusiastic bee-keeper should secure it a place in the homes of many readers of the JOURNAL and *Record*.

Well done, Kent!—The splendid programme outlined by Mr. Brice in last *Record* deserves the most cordial co-operation of all bee-men in Kent and the neighbouring counties. Only a county "full of riches" and with a population, "liberal, valiant, active, wealthy," could think of imitating such a scheme; but, gifted with so many of the virtues and blessed with so very many prominent and eminent bee-keepers, the present wave of enthusiasm now sweeping over that corner of the island should insure for it a triumphant success. The commendatory words I have quoted above are from no mean source, being Shakespeare's; and their application seems so pat and the occasion so appropriate that they will bear being given in full:—

> "Kent, in the Commentaries Cæsar writ,
> Is termed the civil'st place of all this isle;
> Sweet is the country, because full of riches;
> The people liberal, valiant, active, wealthy."

D. M. M., *Banff*.

SOME HAMPSHIRE NOTES.

[4781.] *A Simple Home-made Feeder.*—The very unfavourable weather makes it necessary to keep feeding well to the front, and this being the case I thought it may be helpful to many to bring before their notice a very simple feeder, one which I have used for years and, with me, approaches perfection. Many will say, "I wonder I have missed such a simple thing." Well, the feeder is a Lyle's "Golden Syrup" tin, to hold 2-lb. Perforate the lid with about a dozen small holes, as in an ordinary slow-feeder, and when filled with syrup place the lid on tight and invert over feed-hole. It will be seen that the indented part of lid when inverted gives about the proper bee-space, so that all is easy, for the bees have free access to all the holes in the lid when taking the syrup. There is no drip beyond a drop or two as the feeder is turned over the feed-hole, and what little syrup escapes then is exactly what is required to give the bees a start in feeding. If the bee-keeper is assured that every colony in the apiary is healthy, the simple way to use these feeders is to have one for every colony in the apiary and one to spare; fill the spare one and commence by removing the empty and replacing with the full one, and so on through the lot. If rapid feeding is required use four or six to one colony. But feeders should never be mixed up and changed about where disease is known to exist among the bees.

Queen Introduction.—The following method of introducing queens may be worth recording, but, as a word of warning before attempting it, I should explain that the colony must be got out of what is called "normal condition." For instance, when bees—either by accident or anything else—chance to lose their queen, the loss is soon discovered, and immediately this happens the bees are seen to be in a state of great agitation, running up and down the hive-front and over the alighting-board. Symptoms like these show that the bees are not in normal condition, and then would be the most favourable time to carry out my plan, but should the colony have been allowed to start queen-cells, they would be then as much in a normal condition as though they had a queen. I should, therefore, never advise introducing queens when there are newly-built queen-cells in the hive. With these few preliminary words let me say the plan is as follows:—When desiring to introduce a new strain of queen, or young one in place of old queen, first remove the latter and wait until the colony has reached the stage of agitation mentioned above. Cage the queen to be introduced in any common cage of, say, perforated zinc (size 2 in. by 1 in. will do), and place her on the alighting-board; in nine cases out of ten she will be favourably received by the bees at once; and they will show it by starting a joyful hum and by marching round and over the cage, the number increasing every moment. Now is the time to release the

queen without moving from alighting-board, and, when at liberty, she will quickly run into the hive along with the bees without further trouble.

Management of Surplus-Chambers.—I hope the time is near when this part of the season's work will keep us busy, though we are not much encouraged by the present weather conditions, it being now nearing the end of May, and feeding has had to be kept going to keep bees alive, while snow, hail, and rain storms have been almost continuous for a month. But, as the honey-season is nearly with us, we cannot shut our eyes to the fact that we must talk of supering, and as a great many are desirous of preventing swarming, a word as to my plans in this direction may help some. The management of surplus-chambers is one of the most important things connected with bee-keeping. It is closely connected with non-swarming, and has taken some of us many years of much practice to carry it through in anything like proper form. To prove this, one only has to read the doleful tales of too much swarming that are so often prominent in our BEE JOURNAL. Why is it? The question is not easy to answer. Suppose we say it is the bee-keeper's own fault; but it may be his misfortune, or shall we term it ignorance or lack of experience? Most probably it is the latter, or, to put it in a milder form, it is want of knowledge and practical experience in the craft. In my opinion, the chief fault lies in the fact that the hives are allowed to almost boil over with bees before supers are put on. The experienced bee-keeper readily detects his most promising colonies in early spring, and can see pretty clearly which of them are going to do well, so that he can almost see the end from the beginning; therefore, as soon as the spring is advanced enough for one to form a correct idea of which lots will make a good colony, the super should be put on, taking care to use plenty of coverings, of course. My reason for supering early is that as the bees increase they naturally take the super to be part of their hive proper, and when this is the case they have, as a rule, no thought of swarming until their home becomes inconveniently crowded. I do not use excluder zinc; if I did, I should leave the super on the hives all the winter, and for early sections this plan of letting supers remain cannot be beaten, as I find the bees begin storing in them as soon as surplus honey is being gathered. They do this instead of being obliged to place all honey not required for food in the outside combs, and this causes the brood chambers to be left very much to the queen for egg-laying, instead of being blocked with honey. This plan may be new to many who may fear trying it on account of the general idea that colonies must be crowded before putting on surplus chambers. Others may also think that leaving supers over the brood-nest at such times of the year may be detrimental to the well-being of any stock. Such an idea is, however, altogether erroneous. I have practised this plan for years with great success, and my best colonies at present are those which have had boxes of shallow-frames on all the winter. Another point is I have never had a swarm issue from a hive wintered in that way, while, although as regards strength at present, they are in condition to swarm now, they refuse to do so. Not only is this so, but I know that such hives will give me the first "takes." I do not draw conclusions merely from one or two instances, but as I run an apiary of fifty colonies (winter count), I have had ample room to prove the truth of my assertion that colonies do not suffer through having an upper story on all the winter, and also that by this method I can work through the whole season without a single swarm, or only let such hives swarm as I choose according to the number I require.—OWEN BROWNING, *Ashley, Kingsomborne, Hants.*

PATENT HIVES.

[4782.] I would like to ask: Are the words of your contributor "D. M. M." in BEE JOURNAL of May 15 to be taken seriously when he writes respecting a patent hive? Because, if so, I wish to call attention to the fact that for the past two years I have been using a hive answering all the purposes claimed for that of Mr. Reid, as described by "D. M. M." in his "Current Topics" on page 192, with this difference—the standard frame is used in the brood-nest and nucleus, and the supers will take the usual shallow-frame. Comb and extracted honey can be taken from the same super; swarming is controlled; nuclei are provided for under same cover; ventilation and feeding is simplified; and the stock can be packed and sent 100 miles for heather, if desired, without loss or damage.

My aim has been to design a simple, complete, handy, and efficient hive. I have done this, and as I have freely received so I freely give. If, then, it is of sufficient interest to your readers, I will at a less busy period of the year give your readers the benefit of my labours.

Trusting that I may have the pleasure of shaking hands with "D. M. M." at the "Royal" Show at Carlisle in July,—J. GRAY (Travelling Expert of the Cheshire and Cumberland B.K.A.s), *Long Eaton, Derbyshire, May* 20.

A BEE-NOTE FROM OXON.

FEEDING NEEDY STOCKS.

[4783.] Since my last note the weather has been very variable, but mostly adverse—one day wet; next day cold storms, with frost at night. Recently we had 9 deg. of frost at night, and have had only two good bee-days for the last three weeks, viz., on the 10th and 11th. The first swarm of 1902 that I heard of in our district came off at Sanden-cum-

Churchill, where the bees are in a hollow, so they have escaped a good lot of the rough gales we have had lately. Your warning on page 191 as regards feeding stocks was sound advice, as several have lost stocks around here this last week, though it was chiefly their own fault. I had advised them to feed, but no—it was too much trouble; and they say the bees work well carrying in yellow stuff, as they call it, on their legs. One gentleman wrote to me from Little Lew, and he says: "What weather we have had for the bees. I nearly lost three or four lots for want of food. I have been feeding up till last Saturday, when the weather turned for the better, I hope; at any rate, we had a grand bee-day yesterday, and to-day (Monday) the best are just in their element among the sycamore, chestnut, and apple blossoms; the apple trees are a grand sight just now. I noticed the bees busy on the oaks to-day; also heard of another swarm coming off yesterday (Sunday)—that is the first we have had here. The fields are yellow with the dandelion and buttercups now, and bee-forage everywhere. I already have one lot working in the sections; so, as the old adage says, "All things come to him who waits."—E. T. EDEN, *Chadlington, Oxon, May* 26.

DONATIONS TO SHOWS.

[4784.] Will you be so good as to own an anonymous donation received by me for our Crystal Palace 1902 Prize Fund of 3s. from "Sussex Bees"? I have many others, but I am able to acknowledge all but the above-named.

One bee-keeper, however, has sent back my appeal without either his name or his cheque. Should this meet his eye, perhaps he will think to send the cheque later on! I dislike begging, especially in this Coronation Year, when everybody is begging of everybody else; and as for local appeals for this, that, and the other, they are legion. Those of our friends who have not yet sent in their contributions for our K. and S.B.K.A. Crystal Palace Prize Fund will greatly oblige me by remitting all they can—the smallest sums will be acceptable, I am not proud.—E. D. TILL, *Eynsford, Kent, May* 26.

REGISTERING DESIGNS.

BEES BREEDING IN CANDY-BOXES.

[4785.] Referring to the mention of bees breeding in candy-boxes in your recent issue (page 184), I may say this happens every year in my apiary in at least two or three hives. I generally crowd to as many frames as the bees will cover in the autumn, but do not always find that it happens in the hives so crowded; as often as not it is in those with ten frames. I think it occurs because the candy-box is a nice warm place right over the cluster.

With regard to your reply to "D. Brown" (page 190), he will find at the end of Messrs. Thompson's hand-book on "Patent Rights" a short chapter on "Registering Designs," and from this it appears that "to *register* such a thing as a swarm-catcher, or anything in which a *principle* is sought to be protected, is just a waste of money, and confers no protection, as long as in copying the principle the appearance is altered, and it is even doubtful if this is necessary, as it is not legal to register a *principle*."

Such an article as Messrs. Jas. Lee & Son's show "section case" is a good instance of a subject for *registering*, as the design of it is the essence of the thing, and no principle is involved.—GEORGE M. SAUNDERS, *Hon. Sec. Cumb. B.K.A., Keswick, May* 24.

BEES STARVING IN MAY.

[4786.] Will you kindly impress upon the readers of the B.B.J. this week the great need there is of feeding their bees at once? During the past week (while visiting has been possible) I have found bees to be generally in a starving condition. Many have already cast out a large quantity of immature brood, others have been found with only sufficient vitality to cling to their combs and quiver their wings. Some hives with sections already on were found quite dead of starvation, the owner being quite astonished, as there was plenty of bloom around.—W. A. WITHYCOMBE, Expert of the Essex and Suffolk B.K.A., *Southend-on-Sea, May* 20.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

In Mr. Finch, whose apiary appears on next page, we have another worthy bee-man of the artisan class, who, being a joiner by trade, of course makes his own hives. That he makes them well goes without saying, but it needs the assurance of the maker himself in order to understand that the neat and trim hives seen are made from "Quaker Oats" boxes and packing-cases. It bespeaks the true workman—who is also a bee-keeper—when we learn that he stops short at the roof-pieces, when using second-hand stuff, and provides suitable wood for these.

B.J. readers, along with ourselves, will sympathise with our friend in his trouble with "F. B." among the bees, and trust that the plan he has foreshadowed for dealing with the pest will be as successful as it deserves. At all events, he has got hold of the right ideas with regard to treatment, and the time is seasonable for carrying it out.

For the rest, his "notes," written at our request, speak for themselves:—

"In response to your request for a few notes to go with picture of my apiary, I fear there is very little to tell which will interest your readers, but if a 'plain, unvarnished tale' will suffice, I will write it with pleasure. I started bee-keeping about 1882, being then

sixteen years old, and living in Acton, Suffolk. The vicar of the parish and also the schoolmaster were bee-keepers, and made the subject so interesting to me that I soon became the possessor of a swarm, which did not live to see the next summer. This first mischance with the bees was probably due to my insatiable curiosity leading me to examine it more or less morning, noon, and night, and at intervals all through the winter. However, having sown my wild oats, so to speak, I settled down into more practical ways, and gradually built up an apiary of thirteen stocks. In 1887 I was obliged to leave the county, and in consequence had to sell out, and for three years had no opportunity of riding my hobby. In 1900 I came to Caterham, and bade adieu to life in London, and sought 'fresh fields and pastures new.' It was a difficult job to get a cottage with garden suitable for bee-keeping at Caterham, but eventually I secured the one I now occupy, a part of the garden containing the bees being shown in the photo. Starting with three purchased stocks, I have in the intervening two years increased to nine. I also secured 190 lb. of honey last year. My wife does the bottling and selling, and she does it very well, too; but I cannot quite get her to 'face the music' when it comes to handling the bees, though, as she has pluckily promised to hive all the swarms this year, I have great hopes for her bee-keeping in the future.

"I had hoped during this summer to pay off all the expenses connected with my bee-keeping incurred from the start that had not already been cleared off, besides getting a bit of profit for my trouble; but owing to an outbreak of foul brood which has affected most of the stocks, if I can manage to get them all clean and healthy at end of the year I shall be satisfied. I am feeding the bees with medicated syrup with a view of getting them into swarming condition, then, three weeks after swarming, to destroy all old combs, quilts, &c., and give them a fresh start. The disease does not seem to be of the very virulent type, and the effect of the medicated syrup has been most marked. After thirteen years' interval between my first and second period of bee-keeping, the changes and inventions which struck me most were the 'W. B. C.' ends in place of the cumbersome lead ones, 'weed foundation,' 'shallow-frame supers,' and the 'Porter' bee escape, all of which I consider great improvements. I am a joiner by trade and make my own hives, those shown in the photo being made from "Quaker Oat" boxes and packing cases, with three good pieces of wood for the roof. I should like to add that I have profited greatly by the sound advice and reliable information given in the BEE JOURNAL and *B. K. Record*, and I hope the two papers will continue to flourish exceedingly. In conclusion, I wish you and all the craft a good and prosperous season."

MR. A. FINCH'S APIARY, CATERHAM, SURREY.

SPREADING BROOD IN SPRING.

Several subscribers to the *American Bee Journal* wish me to give an article on spreading the brood in the beehive in spring, and what is to be the object to be obtained. To this I will say that it is a common trait in our American people—that of desiring to get all that is possible into the "now" of life—they are not willing to wait till another year for what, with a little extra exertion, can be gotten this year; and so it comes to pass that in almost every pursuit in life we see a reaching forth for the fruits of *to-day*, and the bending of every energy and nerve to accomplish great results during the present season. And bee-keepers are no exception to this rule.

The old and natural way was to allow the queen bee from four or five years in which to lay her 700,000 to 800,000 eggs Nature had provided her with, but the Yankee "pusher" says she must lay all of these eggs in from one to three years if the thing is possible, and if the science of apiculture is to demand our attention. Hence many plans have been devised to stimulate the bees in spring, so that they in turn would feed and coax the queen to lay the greatest possible number of eggs, the said eggs really meaning the labourers in the harvest field.

Without going over the many plans devised to accomplish the object sought, I will simply say that after trying nearly all, I consider the mode of stimulating known as the "spreading of brood" the best of any, for by it the queen can be coaxed to lay to a greater extent than by any other which I have tried.

Before describing the plan, I wish to say that it requires great care and considerable experience to be successful with it, for an injudicious move will often make the colony worse off than it would have been had it been let alone.

As soon as we can reasonably expect warm weather has come to stay, which in this locality is at about the time the cherry and plum trees bloom, we go to a colony of bees and lift out the combs to see the shape the brood is in. If it proves to be a good colony we will find brood in five or six combs, the two central ones being well filled, while the outside ones have little more than half a frame full. Finding a colony in this condition at this time of year, we do what is called "reversing the brood nest," that is, we put the two central combs, or those having the most brood, at the outside, and those having the least brood in, in the centre, between the full ones. Now the six combs of brood occupy the same place in the hive that they did before, except that those having the least are in the centre of the brood nest. This places the most advanced brood near the outside of the cluster of bees and the youngest in the centre, and allows the queen to lay her eggs in the warmest part of the nest instead of the coldest part, as she was doing before. The bees are also averse to an empty comb-space in the centre of their nest, so see that it is filled in the shortest time possible, thus coaxing the queen to fill those empty cells with eggs in less than one-half the time she naturally would.

If the weather keeps favourable, in about a week we go to this hive again and take one of the combs from the next outside of the hive, one having considerable honey in it, and after moving the combs along till we come to the centre of the brood-nest, we insert this comb, after having broken the sealing to the cells containing honey, by passing a knife over them flatwise. The bees go at once to removing this honey, and in doing so are stimulated to feed the queen to a greater amount, and the heat of the colony is increased so that the queen fills the cells with eggs almost as fast as the bees remove the honey, through this still greater incited activity.

In this way we keep on inserting combs till all in the hive are filled with brood. Should it so happen, before we secure brood in all the combs, that the queen does not keep up her egg-laying in the outside combs as the brood hatches, this can be remedied by again reversing the brood-nest.

As the season advances, so there is no danger from chilling, through a greater number of bees and warmer and more settled weather, two frames can be inserted in the centre at a time, every week, if need be.

If all has worked well the hive should be filled with brood in a little over one-half the time it would have taken if let alone, so that double the number of workers will be ready for the harvest, if we have planned our time of commencement wisely, than otherwise would have been.

If the honey harvest comes very early in your locality you will want to commence to spread the brood five or six weeks before this harvest, in order to meet the harvest with the maximum number of bees. If you have a late harvest, then govern yourself accordingly; but remember that the earlier you commence the more care is needed.

To show the harm that may arise, let us suppose that you have a moderate-sized colony which is carrying all the brood it can keep warm in moderate weather. We go and insert a comb in this nest, and by so doing cause the colony to spread out so as to keep just so much more comb-space warm. Now it turns cold, and after a little the bees are obliged to contract the cluster to keep from being chilled, in doing which they leave the two outside combs of well-developed brood to perish in order to protect themselves and the centre combs containing eggs and the youngest brood. Without explaining further, all will see that much harm, instead of good, would result. Therefore I said at the outset "care and experience" are necessary. With these, great gain can be made by spreading the

brood. Without them, the colony is much better off undisturbed.—G. M. DOOLITTLE in *American Bee Journal*.

Queries and Replies.

[2859.] *Dead Queen Cast Out.*—1. After reading your words of warning to bee-keepers on page 191 of BEE JOURNAL for May 15 to overhaul stocks without delay, I to-day looked through my two hives, and the result makes me very thankful to you for your advice. I gave to No. 1 stock the only frame of sealed honey I had by me (about 4 lb.); No. 2 stock had to be content with syrup made as per "Guide Book." No. 1 was the first hive I overhauled, and whilst manipulating this, I happened to glance at entrance of No. 2, and was a bit startled to see a worker-bee trying its best to haul away the enclosed dead queen. I therefore lost no time in getting to work on the hive in order to see about its queen, and was very pleased to find brood in all stages; also when examining the last frame I found a splendid queen—much larger than the dead one enclosed—and you may guess how relieved I was at finding her. I am puzzled to account for this state of things. I will therefore be glad to have your opinion as to cause of this? I cannot say I saw any fresh queen-cells on the combs. 2. Please also give probable age of dead queen, and say if she is fertilised.—J. DAVIES, *Midsomer Norton, May* 20.

REPLY.—1. Having made sure that the queen of No. 2 was present in the hive, your next fear should be with regard to the queen of No. 1, seeing that the probability is that, by some misadventure in handling the combs of the last-named hive, the queen may have taken wing and entered No. 2 in mistake, and so been promptly killed by the bees of the latter. We advise immediate inspection of combs in No. 1 to see if any eggs can be found or queen-cells are formed. Should there be eggs the queen will no doubt be all right. On the other hand, the formation of queen-cells will reveal the nature of the mishap. 2. The dead queen received is a well-developed adult queen, and certainly has been fertilised.

[2860.] *Albino Drones.*—I herewith enclose a dead drone for your inspection, and shall be glad to know if you have ever met with any similar—*i.e.*, with a *white head*. Can you give any reason for its curious condition? Is it owing to any particular cross? I shall be obliged for reply through the BEE JOURNAL.—J. S. LAWTON, *Bridgnorth, May* 23.

REPLY.—The dead bee sent is an Albino—or white-eyed—drone. Though not common, it is by no means rare to see such, and few bee-keepers of much practical experience have missed coming across these curious and abnormal specimens of bee-life. Our experience is, of course, somewhat exceptional, but we have seen many dozens of such at various times. They are mentioned in our Senior Editor's work on "The Honey Bee: Its Natural History, Anatomy, and Physiology" in the chapter on Hermaphrodite Bees, and also in Cheshire's book, "Bees and Bee-keeping." When examined microscopically it is found that the eyes are quite destitute of pigment, and, in consequence, the Albino drone is, though not stone-blind, unable to do more than just distinguish between light and darkness. Not only the large or compound eyes—which in the drone meet at the top—but the *ocelli* or small simple eyes, are perfectly white, as in your specimen.

[2861.] *A Beginner's Queries.*—I began bee-keeping last year, and secured about 35 lb. of honey from one frame-hive, which was considered good for this district (North Dorset). I have now several more stocks, one of which was in a terribly dilapidated hive, but which was reported as having always been very profitable. I have transferred the frames of this stock to a new hive, in which they have settled down all right, but occasionally I have found a few almost fully developed brood cast out, chiefly drones. I therefore ask:—1. Is it chilled brood, or does it arise from improper spacing of the frames in the hive? They are very wide combs, nine of them occupying, I believe, the space for eleven frames. 2. I have since found some brood cast out from another hive with frames properly distanced, but without super on. I enclose some brood found outside, and ask your opinion on this. 3. I leave the hive-entrances open about 2 in. at night, and increase the width during the day if weather fine and entrance crowded. Should this be done? 4. Do you recommend the use of unbleached calico (painted or unpainted) for placing on tops of frame-bars and ordinary woollen felt above? 5. I had drones flying more than a month ago. Was this unusual? The bees are busy carrying in quantities of pollen. I have had section-racks on for nearly a fortnight, but they are not yet taken to by the bees. 6. I presume hives with floors fixed to brood-chamber should, in your opinion, be superseded by those having separate floors.—NEW READER, *Sherborne, Dorset, May* 21.

REPLY.—1. The "brood" sent consists of drones which are almost fully developed. Their being cast out at this season indicates scarcity of food. 2. The improper spacing of frames has no bearing on the casting out of brood, the cause being the same in both cases. 3. It is sometimes advantageous to reduce the width of entrances during the prevalence of such cold winds as have prevailed lately, but not otherwise. 4. Unbleached calico (unpainted most decidedly) makes a good first covering for frames, with woollen quilts above, as stated. 5. No. 6. No good bee-keeper

will tolerate fixed floors to body-boxes for a moment in his apiary. The remainder of your queries regarding superseding old queens and on queen-raising are best answered by our advising the purchase of a "Guide Book," for without such a help to beginners success is next to impossible. No one can be taught bee-keeping in our "Queries and Replies" columns.

[2862.] *Re-queening Hives.*—I have read with great interest your articles on queenlessness in our journals, because about the end of last March I suspected one of my stocks being queenless, so on April 8 I took a comb of brood from centre of another hive and placed it in centre of queenless one. In about ten days I examined this comb and found that a queen-cell had been built and was sealed over. I examined again later, and found the queen-cell empty, and saw there was still other sealed worker brood in same comb. I find now that there is no brood in this hive nor yet any signs of a queen. Will you therefore kindly tell me what you think about the present condition of the stock which has lots of bees. 1. How long after being hatched does a queen begin to lay eggs, and what would be the best course to take? 2. I also enclose piece of comb from a skep which has been robbed to such an extent as to be useless. Will you be good enough to tell me if it is quite healthy?—F. HALL, *Nuneaton, May* 15.

REPLY.—1. Seeing that a queen had hatched out from cell found empty, and that the said queen, if alive, would now be about a month old, at least, the probability is that she has left the hive and been lost. Otherwise, she would have started breeding, for a queen usually begins laying eggs a couple of days after being safely mated, and if unmated drone-brood would appear. 2. The comb sent is pollen-bound, old, and dirty; such combs are only fit for burning.

[2863.] *Bees Leaving Hive in May.*—Would you kindly give me a little information tending to explain the following incident: On Saturday last my bees came out from the hive in a body. I thought it was a swarm, as they clustered in the usual way, but, on looking into the hive, found the bees had deserted it completely, leaving young brood and food behind. I got them back into the hive, but they left it again shortly after, so I have now put them into a clean hive, transferring food and brood into the latter; but as they still appeared inclined to leave, have placed a piece of excluder over entrance to stop the queen from getting out with the bees. Was this the right thing to do? Your valued help will greatly oblige—ONE IN TROUBLE, *Finchley, N., May* 25.

REPLY.—We can only suppose that the desertion of the hive, as stated, was what is termed a "hunger swarm," though it hardly accords with your statement that they left food and brood behind. It may be that the internal condition of tho hive was in some way offensive to them, but of this we cannot judge from a distance, and you give no explanation to help us. If you had a bee-keeping friend of any experience near at hand, he could probably explain the cause of bees leaving, after inspecting the hive. You had better take away the excluder zinc without delay.

[2864.] *Dealing with Foul Brood.*—1. After studying Mr. Cowan's "Guide Book," a book which—if I could not get another—I would not sell for five times its cost, I believe the enclosed piece of comb contains foul brood. I should therefore be much obliged if you will say if I am correct. Also if you advise destroying combs entirely. 2. Have you an application form for the B.B.K.A., as I am desirous of joining? Hoping for reply in your valuable BEE JOURNAL, I enclose card, and sign myself—SUBORDINATE, *Bury St. Edmunds, May* 23.

REPLY.—1. The comb sent has foul brood of old standing in two cells only. The larvæ in many of the other cells are affected, but apparently only quite recently. Seeing, then, that the combs have in them foul brood in the spore stage, we advise total destruction, as you cannot hope to keep the stock free from the disease with such combs for breeding in. 2. Applications for membership forms of the B.B.K.A. can only be had from the secretary, Mr. Edwin H. Young, 12, Hanover-square, London.

[2865.] *Starving Bees in May.*—Noticing to-day that one of my hives seemed deserted, my husband and I examined and found the bees all dead but a mere handful. The frames were choked half way up with dead bees, and floorboard heaped up on taking frames away. There seems nothing the matter with frames except total lack of food. I saw plenty of healthy brood patches. I did not think of cutting out foundation or sending to you then, but now feel I should like to be sure whether starvation, or cold, or disease is the cause of the poor bees' death. On April 20 last this stock of bees was supered, the expert considering it ready and very strong on his visit shortly before. I may say he complimented me on the clean, warm, and well-cared-for condition of my hives, so I am the more disappointed at the probability of this misfortune being due to neglect. The very bad weather set in directly the bees were supered, and perhaps I should have taken off supers and continued feeding a little longer. Illness in the house has prevented the usual careful watching that the bees generally get, for we spend a considerable amount of time observing our industrious family. I have put a little syrup in a feeder above the small surviving cluster. Do you think that worth while, or would it be better to take away the hive and frames at once, cleaning and disinfecting? I hope the bees are not too decomposed for examination, and should appreciate an opinion on the

disaster. All the other stocks are strong.—NELLY MORRIS, *Upminster, Essex, May* 25.

REPLY.—There seems to be no doubt that the bees have succumbed to famine and died entirely for want of food. Reference to several reports in this issue go to confirm the urgent need for watchfulness in a time of such adverse weather as has been thus experienced during the whole of May; and with abundance of bee-forage in full flower everywhere around, one can hardly be surprised when inexperienced bee-keepers fail to note how great is the consumption of food in brood-rearing at this season. It is quite certain that thousands of stocks have perished while in what may be truly called the full tide of prosperity, for want of a quart of syrup costing only a few coppers.

Echoes from the Hives.

Terrington St. Clement, Lynn, Norfolk, May 21.—Echoes from the hives, indeed! I have just walked past mine at midday; not a bee flying, the wind keen, bitterly cold, not a bee-note heard at any hive entrance, yet the apples in full bloom, the wallflower, cabbage, and turnip-seed plants producing abundance of pollen, but so far as bees are concerned, there is practically no activity at all. They were remarkably busy during April, whenever the sun shone, and while the hyacinths were in bloom, but I fear stores are now short, and the brood-nests small. To make sure I have been feeding my own bees for the past month, but feeding alone will not maintain the normal temperature of the hive when we are having sharp frosts every night, a cold "north-easter" blowing a perfect hurricane at times, and the ground sprinkled with snow and hailstones! At present it appears that the editorial advice, so often given to beginners, not to rely entirely upon the profits of bee-keeping for a living, is about to be severely enforced this year. I am already needing honey. I have only two dozen sample jars left of my last year's 5½ cwt., the greater part being disposed of retail.

Yeovil, Somerset, May 22.—The weather here has been anything but bee-weather, barring a few spasmodic attempts to be fine. Consequently work in hives was practically at a standstill. Forage, especially apple blossom, very plentiful, but is being wasted day after day. Notwithstanding all this, I saw a swarm a day or two ago, and have heard of two others. I wrote you on March 1 last *re* two hives having drones. I find in one of these hives I have a drone-breeding queen in her second year. The other hive is my strongest stock, being now crammed with bees. Would a young queen be likely to get fertilised if there were no drones in one's own apiary, provided there are others in a range of, say, a quarter of a mile? [Yes.—EDS.]—GEO. WM. PERRY.

P.S.—As I write I am in receipt of a message to say that the hive spoken of above as being very strong has thrown off a magnificent swarm, extending nearly a yard down the trunk of an apple tree. Let us hope that this is the beginning of better things.

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A. Schedules from D. W. Bishop-Ackerman, Hon. Sec. Berks B.K.A., 131, King's-road, Reading. **Entries closed.**

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A. Schedules from Edwin H. Young, Secretary, 12, Hanover-square, W. **Entries closed.**

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Thirteen classes, with liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 18.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22, Leam-street, Leamington. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers**

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

W. J. SMITH (Tottenham). — *Pollen-clogged Combs.*—There is no known or easy method of cleaning pollen-clogged combs to render them fit for use. We have heard of the possibility of washing out the pollen by leaving them under a water-tap kept running on them for some hours, but personally we should not think the game worth the candle so far as regards trying this plan. If the combs are old, in addition to being pollen-clogged, as stated, we should burn them out of sight as not even worth melting down for wax.

WARGRAVE (Romford).—*Moving Bees Twenty Yards in May.*—The distance named is an awkward one at this season. It is rather too far to move the hive "a yard or so at a time," as is usually recommended, yet not far enough to render temporary removal for a couple of miles an imperative necessity in order to avoid loss of bees. As a middle course we advise moving about three or four yards at each move, and using an empty hive as a "decoy" to lure the bees for half the distance between the old and new position as each "move" is carried out. And only operate on warm days when the bees are flying freely.

H. K. (Selly Park).—*Preventing Swarming.*—We should be very pleased to advise with regard to prevention of swarming, but when you tell us your hive contains "a great deal of healthy brood," and then say, "I found six or eight young queens, but only about a dozen drone-cells with brood and no drones flying," we are rather at a loss how to reply. If by "young queens" you mean queen-cells, it will stop the issue of a swarm for a time if all these cells are cut out; but you must keep on doing this if the bees are bent on swarming.

C. E. ETCHELLS (Nettleton).—*Wax-Moth.*—The grub sent is a larva of the true wax-moth (*Galleria cereana*). The only remedy for this bee-pest is watchfulness and destroying the larvæ whenever found.

Suspected Combs.

H. S. L. (Ilford, Essex).—Comb sent, judging by the cappings, is a characteristic specimen of a bad case of foul brood, but every trace of the dead larvæ has dried up and disappeared we know not how long ago. It is, therefore, a mistake on your part to say, "I have never had foul brood since I started bee-keeping about eight years ago," seeing that the hive your sample was taken from must have been affected for a long time past. Your best course is to enlist the help of the county expert, who will, no doubt, help you.

CUI BONO (Abingdon).—Comb contains "chilled brood" only.

J. C. (Thanet).—There are slight signs of incipient foul brood in comb which contains almost wholly "chilled drone-brood." Why send whole comb in a box measuring 17 in. by 18 in. when a couple of inches in a tin box and a penny stamp will suffice?

M. W. (Liphook) and R. E. (Llanbedr).—Bad cases of foul brood.

M. P. (Devon).—No disease in comb sent. The contents of one cell certainly had a suspicious look, and only microscopic examination could decide the point. We are therefore glad the expert drew attention to the matter, instead of passing it over as some might have done.

F. W. P. (Plymouth).—Regarding the six samples of comb sent, Nos. 1 and 4 contain "chilled brood only," 2, 3, and 5 no brood at all, and 6 is drone-comb that has never had brood in it.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

STRONG Natural SWARMS, 1901 Queen, 12s. 6d.; second ditto, 1902 Queen, 8s. 6d. Guaranteed healthy. W. WOODS, Normandy, Guildford. M 85

WILL EXCHANGE PURE WELSH TERRIER BITCH for BEES, Orpington or Andalusian FOWLS. ROWLANDS, Maes Pwllheli. M 93

SIX STRONG STOCKS BEES, in new Frame Hives. Warranted free from foul brood. No reasonable offer refused. Mrs. PASSINGHAM, Beaumont, Cheltenham. M 84

ENGLISH EXTRACTED HONEY, guaranteed pure, 40s. per cwt.; delivered on rail at Manea Station, carriage forward. Empties returnable. F. PEPPER, Victoria-street, Chatteris, March. M 87

ORDERS for June SWARMS. Executed in rotation. 4 lbs. 12s 6d., 5 lbs. 15s., 6 lbs. 18s. Guaranteed healthy and safe arrival. WHITING, Valley Apiaries, Hundon Clare, Suffolk. M 92

A FEW guaranteed HEALTHY STOCKS BEES in Skeps, 10s. 6d. each, packed; 2 young fertile Laying Queens, 4s. 6d. each. SPEARMAN, Colesbourne, Cheltenham. M 89

TWO good HIVES FOR SALE; contain nine standard frames and zinc roofs, 5s. each. Also Two new SKEPS, four second-hand ones; what offers? NORTH, Hungary Hall, Faulkbourne, Witham, Essex. M 88

WANTED BEES or APPLIANCES. EXCHANGE Dragon Pigeons, winners of medals and many prizes; 8 pairs for disposal; giving up fancy. Particulars, or sent on approval with pleasure. FAIRALL, 27, Newbridge-street, Wolverhampton. M 91

BLACK ORPINGTON COCKEREL second prize winner, 17 in class, exchange Bees, modern hives, or appliances, sell 25s. Eggs off winners, 3s. 6d. duck eggs, Aylesbury Pekin, 2s. 6d. THOMAS THORPE, Lea, Matlock, Bath. M 94

SWARM CATCHER; Meadow's Guinea Extractor, (cog-gearing); Wax Extractor; large Ripener with lift; quantity slotted Separators; all as new. What offers in cash or exchange? CHAUNDY, 25, High-street, Margate. M 95

EXTRACTOR (Honey) FOR SALE, cheap. Excellent condition; cost 15s.; Smoker, 1s. 6d. Also fine hardened Plants, French Marigolds, Canterbury Bells, mixed Sweet Williams, Pyrethrum, 4d. doz.; Phlox Drummondi, Ageratum, Lobelia, 5d.; Single Petunias, 7d. H. MOORE, Sherborne, Dorset. M 86

SWARMS FOR SALE, (1901 Queens). A. HOUNSOM, The Apiary, Bosham, Chichester, Sussex. M 68

BEES.—Strong healthy natural SWARMS from skeps. 12s. 6d. CADMAN, Codsall Wood, Wolverhampton. M 74

Editorial, Notices, &c.

THE NEED FOR ASSOCIATED EFFORT.

"A CASE IN POINT."

There has from time to time been a considerable amount of what may be called "expressions of opinion" regarding the value, or otherwise, of bee-keepers' associations to bee-keepers themselves.

As is well known, there are in various counties throughout the Kingdom a number of associated societies, the members of which are bee-keepers whose object is to work unitedly for the common good of the craft. But it is less well known—save to the hard-worked secretaries—how much of difficulty there is at times, in collecting the small annual subscriptions that have so important a bearing on success or failure—as the case may be—in promoting the objects for which these associations are established.

It is no less regrettable than true that there also exists a class of bee-keepers whose view of associated effort is bounded by the limits of their own apiaries, or by what affects their own actual profit from the season's bee-work. To talk to them of labouring for the greatest good of the greatest number is so much time wasted. It is more after their manner, when applied to for an overdue subscription, to reply by the oft-recurring question, "What do I get for my money? You don't sell my honey for me." Well, there is no need to go over well-trodden ground in trying to show such men how utterly one-sided and selfish is the view that unless one "sees his own back and a bit over" he gets no advantage from membership. Surely the benefit to the industry, as a whole, which is bound to come from well-directed effort on the part of bee-keepers' associations should be acknowledged by any fair-minded man. But to bring the matter home, let us say a notable "case in point" has just come to our knowledge which can hardly fail to prove an incontrovertible argument in our favour, unless those we have in view are determined not to be convinced.

We refer to a letter received a few days ago from a bee-keeper in Wales, whose case is not only distressing, but instructive to a degree in pointing the moral we desire to enforce. He writes as follows:—"Will you kindly inform me what is the matter with the comb sent? I rather suspect it is affected with foul brood, and so I ask, What is the best method of dealing with it at this time of the year? I have eighty hives, most of them more or less affected in the same way. I will gladly pay for your advice on the matter, which I should like to have as soon as time admits. I enclose stamps for reply by telegraph in the meantime."

Beyond name and address (which are for obvious reasons omitted), the above is all we know of the writer or his bees. The eighty hives may be all skeps or all frame-hives, and the writer may be a farmer or follow another occupation; we do not even know how long he has kept bees, or if a reader of the BEE JOURNAL. We do, however, know that our badly-stricken bee-friend knows nothing whatever about foul brood, for the sample of comb sent was absolutely rotten with disease—almost every cell reeking with it. Consequently, there are at present some four score of hives (for we cannot suppose the exceptions will be other than few in such a hot-bed of disease) standing in one spot—enough to contaminate the whole of Wales in a season or two, and there is, unfortunately, no association of which we have any knowledge in the county.

Of course, we did not intend our friend to go unassisted, so we at once wired reply, "Very bad case of foul brood; letter follows." In our letter we recommended that no attempt whatever be made at dealing with the hives himself or through correspondence with any one; the only safe course being either to engage a competent expert to inspect the hives and advise further after doing so, or else to burn the lot!

Now, if the above simple statement of fact does not form a case in point strong enough to prove the need for a county B.K.A., and for the associated effort which is so desirable, we should like to know what will? And if these lines have any effect in stirring up fresh energy on the part of associations, and of infusing a sense of more generous and public-spirited views from those whose failure to help is so depressing to men who spare neither time nor money in working for the good of the industry at large, we shall be more than repaid for inviting the attention of readers to the usefulness of the B.B.K.A. and its affiliated county associations.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4787.] The month of roses, leafy, sunny June, is with us again. We have rapidly passed from wintry weather to the humid warmth of summer. A fortnight ago ice might be shovelled up into heaps, to-day I am

—like the patriarch of old—at "the door of my tent" (my manipulating-house at the out-apiary) under a natural verandah of may-blossom. I pen these "Notes" within sound of the merry hum of the bees working with all their might in making up for lost time in the so-called "merrie month of May." We have now a fair breadth of forage, trefoil in full bloom, trifolium just starting to flower, sainfoin in bud, along with a sprinkling of white clover. In the woods and parks sycamore and chestnut, holly, and other trees, all promise goodly forage for the ingathering.

Swarming is late this year, but a few lots came off from straw-skeps in the valley of Pang between Saturday and Monday last. Vegetation has made rapid strides during the late few warm, rainy days. To-day the barometer is rising slowly, this giving good hopes of a spell of fine weather in which our bees will assert themselves in swarming and work and engage our whole attention.

The Insurance Scheme.—The BEE JOURNAL is silent, so far, as to the way this matter is being taken up, and I trust I shall not be considered a carping critic in giving my opinion on "the scheme." 1. I trust many more than 5,000 hives will be insured, otherwise the 5,000 1d. (not quite £21) will be a poor start for any insurance company to deal with. 2. My view of the matter is that these insignificant amounts of 6d. are not worth the trouble of booking and issuing policies for, even if the clerical work is given gratis. 3. There is no relative proportion in the premiums and the sum insured. A three-stock to six-stock apiary pays the ridiculous sum of 6d., and is for this infinitesimal sum entitled to £30. The twelve-stock apiary pays 1s., the sixty-stock 5s., and the bee-farmer with his 120 stocks 10s., yet the apiarist who pays twenty times the amount of the former only receives up to £30 in case of accidental loss through stinging. Is it a benefit insurance scheme without the graduated scale? 4. My idea is that bee-keepers would gladly pay a premium of 2s. 6d. to insure for a certain sum, say, up to £25, and for 5s. up to £50, this to be the limit for any one apiary, and where a bee-keeper owns more than one apiary, he would, to be entitled to any compensation, insure each apiary, and the location of each apiary insured should be described on the policy. If the insurance company would undertake the risks on this 10s. per centum scale, the matter would appear to me much more simple. Possibly the risks may be so assessed by the insurance company that they would be prepared to augment the amounts mentioned above. I know thatched buildings, cottages, &c., are insured against fire at 5s. per £100, and probably the risks of stinging bees would not be considered greater than fire in thatched cottages, as the cottages are open to twelve months' risk each year; whereas the stinging of bees would not extend to more than three months in each year, except in cases of run-away hives or straying cattle getting into the apiary and overturning the hives.

Quilts.—A bee-keeper writes: Tell me what you use for first quilts? I reply, hempen stair-carpet, 16 in. to 17 in. wide, at 2¾d. per yard.

Selling Swarms.—May I be allowed to say a word or two on the "comment" of our friend "D. M. M." (on page 211) with regard to price and weight of swarms. I expect the downward price of swarms are in a great measure caused by the difficulty many have in disposing of their crop of honey; hence their desire to have another string to their bow, and by selling their surplus-swarms they increase their profits in bee-keeping. As to the price being lower than formerly, it, no doubt, arises from competition, or, perhaps, by the excess of supply over demand. Those newly embarking on sales of swarms, offering at a lower price to secure sales or as an incentive to establish a name by "cutting prices," as the trade-term is. Mr. "D. M. M.'s" advice to demand full 16 oz. to the pound *on delivery* after a two or three hundred mile journey, sounds rather like further "cutting" somewhere. Those ounces of so-called "cheap honey" are the very essence of life to the travelling swarm, for if not well provisioned on dispatch, in what condition would the swarm arrive? Dead I have no doubt, or if not dead, so weakened in condition that days might elapse before they would be in condition to work with a *vim* as a swarm should. No, my friend, the "cheap honey" is a *sine qui non* to a good swarm, and a 4 lb. swarm which would turn the scale at 64 oz. on arrival must weigh 4½ lb. to 4¾ lb. on dispatch. Now I ask, does any other vendor give overweight? If a buyer lives over the way he brings his hive, sees the weight, pays, and is satisfied, and the 12 oz. of cheap honey is converted into comb. But the purchaser at a distance must expect swarms to lose somewhat in transit; that is his misfortune in not living near the market, especially as the vendor has to lose the swarm if suffocated by careless railway management.—W. WOODLEY, *Beedon, Newbury.*

NORTH YORKSHIRE NOTES.

"HOME-MADE FEEDERS."

[4788.] I can endorse every word Mr. Browning says on page 212 (4,781) with regard to home-made feeders such as he describes. I have myself used them for ten years, but made slightly different. I have, however, never set them directly on the top of frames, but use a simple feeding-stage, viz., a ½ in. or ¾ in. piece of board, 6½ in. square, with a 3 in. hole cut in centre. Three wire nails are driven in triangle-shape, just so that the syrup tin would go in and out easily. This holds the tins in their places. I have never tried them for rapid feeding, as I always use the "Canadian" for that purpose.

"*Loss of Queens During Winter.*"—As so many bee-keepers suffer loss of stocks through the death of queens in winter and early spring—before the bees can possibly provide themselves with a successor—it is advisable to make arrangements beforehand to meet such cases. This can be done by every bee-keeper at a very small expense. To do this provide yourself with a few small hives holding six or seven frames. These can be made from old boxes obtainable from any grocer at a cost of about 3d. each: if you cannot get them the right size knock them to pieces carefully (and take care of the nails). Make up your small hives to take exactly the same size of frame as those you use in all your hives. The present time, just as the season is opening, is the best to prepare for the issue of any small "cast" you may chance to get during the summer, and put into those small hives, giving them a frame or two of honey. Or if any hives swarm and you do not require any increase, make up a couple of nuclei, and return the swarm after cutting out all queen cells you do not require, and fill up the parent hive with full sheets of foundation. If at all possible set those young queens away in some quiet corner of the apiary, and give a look occasionally to see they all get safely mated. Then at the end of the season use such of them as you need to replace old queens with, and leave as many as you estimate will be required to meet cases of queens dying the following winter, and as many more as you require for queen-rearing during the summer. This can only be ascertained by the size of your apiary. I reserve one for every six colonies, and this meets all my requirements.

My plan in re-queening with those small lots is to take four or five frames out of the hive to be re-queened; then remove the old queen. Put the remaining frames to one side of the hive. Put in a "Wells" perforated division-board close to the combs, and if there is any chance of bees getting past the board other than at the entrance, pack with rag or paper, so that in order to get from one side to the other of the division-board all bees must do this on the alighting board. Let the queenless hive stand for twenty-four hours, then lift the whole of the nucleus colony into the empty part of the hive, and take the small hive—from which they have been removed—indoors. In twenty-four hours afterwards pull out the packing put in at the entrance, and the division-board may be removed on any convenient day afterwards, and all will go on well. I have never had or seen any failure by this means yet, and even if you forget for a week no harm will be done.

The Outlook.—The weather in this part up to the present has been so cold and wet that the present prospect is very poor. Indeed, it is very doubtful a large percentage of stocks will be lost in this neighbourhood for want of attention. I hear of one poor man losing eleven stocks out of sixteen. Others have told me they have had a swarm, but, unfortunately, when the swarm issued, they left nothing behind them but empty comb. Bees should be attended to at once in this part, or some grand stocks will perish through hunger. A few pounds of syrup will well repay you later on. Now is the time to keep your stocks in good heart. This, to a very great extent, means success or failure when the honey-flow arrives.—J. RYMER, *Levisham, Yorks, May* 31.

PATENT HIVES.

[4789.] Referring to the letter of Mr. J. Gray (4782, page 213) on "Patent Hives," as one of the *amateur hive-makers*, I shall look out for the particulars therein promised with a great deal of interest. Your issue of May 29 is to me an *exceedingly interesting one.*—W. C. H., *South Devon, June* 2.

BEES ON THE "HUM."

[4790.] Along with receipt of the joyful news of the cessation of hostilities in South Africa, which reached us this morning, I can report a record "hum" from my five hives of to-day. We ceased work at our manufactory mid-day to follow suit of the larger and more important industries around us in order to celebrate the nation's gladness. I made up my mind for a few hours to go down home and "hum it" with my bees. Indeed, it seemed as if they, too, were joining in the revels of the Nation's gladness. The first real fine day for some weeks. They seem bent on making up, if possible, for lost time. I have been jealously watching them for some weeks, seeing that they did not want for food, thanks to the few "standard" combs of honey I had carefully preserved from last season. I work *one* super (on the strongest hive) of standard frames solely for feeding, and keep seven or eight of them carefully wrapped up until required. I have been constantly watching each hive on occasional fine days during April and May; watched the gradual growth of the brood nests; systematically stimulated them, dropping in a comb of food, as required, after bruising the cappings; kept plenty of quilts on, and gradually enlarging the brood nests until the full complement of frames were in; and I am glad to say that each one is in the pink of condition, and already hard at work in the shallow-frame supers I put on a week ago. I have, of course, stopped all feeding, seeing that they are now filling the supers fast. All the hives seem about equal in condition, and all very strong. Woe betide those beemen who have not fed their little friends during the very trying past two months. It is their own faults if they have lost any of their bees. I had an attempt at robbing whilst feeding a few weeks back, but soon quelled it with smearing carbolic acid on the

alighting board. I have not had a single swarm since I started bee-keeping. "Giving room a little in advance of their requirements" is the great factor with mine.—W. H. Buck, *Dawley, Salop, June* 2.

INSECTS AND FLOWERS.

[4791.] In a recent brochure by Professor F. Plateau, Gand, Belgium, on "Mistakes Made by Different Hymenopterous Insects in Visiting Various Flowers," he expresses his opinion that the vision of these insects is not very clear. He says they pass from flower to flower, often returning to flowers which they have already worked, even trying flowers already partially or completely faded, lastly they will attempt to work buds whose very shape should have warned them off had they been able clearly to discern it.

Dr. Christian Schröder, on the other hand, objects to this view, and maintains that the young bee makes no mistakes.

The only way to make sure on the question is to repeat the observations carefully, and Professor Plateau resolved to give a few minutes every day during the month of August of last year, sometimes in his own garden, sometimes in the old botanic gardens some distance from his home.

The results, in short, were :—

	Nos. observed.	Errors.
Apis mellifica.....	46	87
Bombus hortorum.....	39	60
„ mascorum	14	31
„ lapidarius	2	2
Megachile centunicularis	1	1
„ ericetorum ...	1	1
Odynerus quadratus.....	4	4

Other insects also make mistakes. The *Macroglossa stellatarum* was plainly seen, in visiting the *Ohlos paniculata*, to plunge her trunk in flowers she had already worked a few seconds before, and also to try blossoms which were manifestly faded.

This is only a very short notice of this paper referred to above, but suffices to explain the chief results arrived at, especially as concerns the honey bee. Many other *hymenoptera* are considered, but the mention of these in detail would be out of place in the British Bee Journal.—R. Hamlyn-Harris, *Zoological Institute, Tübingen University, Germany, May*, 1902.

A GOOD REPORT.

[4792.] After the melancholy accounts of starved and starving bees in your issue of May 29, which reports I know, from personal observation during Whit-week, to be under rather than over drawn, I am happy to send you a report of a more cheery nature, for I know of the present excellent condition of swarms of 1902, of completed racks of sections, and of others well on in the neighbourhood of London. No sooner did old Sol show his cheery face on the morning of Saturday, May 24, than out came two excellent swarms at the apiary of Miss W. Curtis, Kingsclere, Nightingale-lane, Balham, one of which was placed on ten fully drawn-out frames of comb which the bees already fully cover, and sections have been transferred from the old hive. I have this morning visited an apiary at Putney Hill and at Roehampton, and found a rack of sections all but completed, the greater part of which were fully sealed over. At another apiary at Wimbledon Park sections are well on the way, so that in this part of Surrey, at least, we are well out of the wood.—W. S. (*3rd Class Expert*), *Wimbledon, S.W., June* 2.

EXPERTS' CERTIFICATES.

CANDIDATES AND EXAMINATIONS.

A correspondent who is commendably anxious to secure the 3rd class expert's certificate of the B.B.K.A. under the *nom de plume* of "Light Liner," writes as follows :—

"I am a bee-keeper, with as much love for the natural, in addition to the financial, part of the business as any one could have, and I am eager to acquire a 3rd class expert's certificate. Those in this neighbourhood whose bees I look after strongly advise me to go in for it, saying they are sure that with my knowledge of and interest in the subject I should succeed ; but I am not so confident, although extremely anxious to get the certificate, and intend to try. Therefore, I am writing to ask if you could give me a brief outline of what one is required to do ; and whether it is necessary to have a *practical* knowledge of foul brood ? The latter is really the thing I am afraid of. I know full well in theory what it is and how to deal with it, but in my several years of bee-keeping I have not yet met with any of it—thus I lack the practical part. In the other parts I think I am fairly well up, but, of course, if I go in for it I should not remain idle in the meantime, but should endeavour to improve."

In view of the fact that each examiner appointed to conduct these examinations for the B.B.K.A. pledges himself to entire secrecy as to the instructions under which he acts, it will not be expected that we can afford much information on the point on which our correspondent requires help. We may say, however, without any breach of the proper reserve necessary, that the examination is divided into four heads—viz., (*a*) driving bees ; (*b*) manipulating a frame-hive stocked with bees ; (*c*) oral or *vive voce* examination in regard to the candidate's general knowledge of practical bee work and the use of appliances ; and (*d*) foul brood. The last-named is an important item, and, though not a *sine quâ non* that the candidate should have practical knowledge of the disease, it is very desirable. We therefore advise candidates to *see* diseased combs if possible.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Leipziger Bienen Zeitung (Germany).—A bee-keeper from Gira-Reuss writes that the Redstart cannot be reckoned among the enemies of the bee.

For five successive years a pair of these birds nested in the middle of an apiary of thirty hives (a closed building). The nest was about 27 in. above the entrance-holes of the hives. Their flight to and fro was so rapid, one could scarcely follow it with the eye—probably to avoid being molested by the bees. There was good opportunity for watching the birds, and they were never seen to take a bee on the flight or in any way whatever. On the contrary, they were the greatest benefactors, for they kept a large plantation of gooseberries free from the injurious gooseberry caterpillar. They rear three broods in the year, and, reckoning only twelve young ones from each pair, what a mass of injurious insects are destroyed during the summer, which man would be powerless to encounter!

At the breeding time of the Redstart, thousands of bees are to be found on the ground unable to fly, and which eventually die there, but it has never been seen that these birds have ever taken any of them.

The Same.—A curious mistake of mutual help among bees is related. A very strong hive was standing side by side with a very weak colony which had been wintered in a cellar, but which had scarcely energy for work.

The owner expected a swarm from the former, but none came. What, then, was his surprise to see a great number of bees from the strong hive marching in at the door of its weak neighbour. He suspected pillage, and as it was too late to interfere the hive was left to itself.

A few days later there were fine new white combs in the hive, which soon became very strong, and threw off two fine swarms in the course of the season.

The same thing occurred about two years afterwards, when the weather was remarkably changeable. A strong hive showed an inclination to swarm in intervals of sunshine; but it was observed that the bees joined those from a very weak stock which stood near, entering their hive with them.

This went on for several days, until the whole swarm had settled into the weak hive.

In a very short time both the hive and a super were well filled.

L'Apicoltore (Italy).—The country people of this district (Alessandria, Italy) are not all ready to adopt the modern hives. In some places the bees are hived in petroleum cases, the ill-joined walls of which give ready ingress to the wax-moth and other enemies.

BEE-KEEPING FOR WOMEN.

ROBBER-BEES.

There are some things in bee-keeping that can be fully learned only by experience. Among these is the danger from robber-bees. No matter how much the beginner may be told about the danger, she will go on in blissful freedom from anxiety until she has one serious case of robbing, and then she will know what robbing is as no book or bee-paper can tell her; and after that she will always be on the alert.

During the time of a good honey-flow there is little danger in that direction. Honey may be left standing exposed for some time without causing any trouble; the bees pay no attention to it. They can get all the nectar they want from the field. But in early spring, or at any time during the season when there is not abundant nectar coming in, look out for robbers. There is danger. My, what a commotion a bit of honey carelessly dropped at such a time will cause! It would seem as if the bees had gone crazy. The apiary that a little time before seemed all peace and quietude is suddenly changed into a howling mob of angry, stinging bees. It would seem as if the entire apiary were engaged in the uproar, when in reality there may be only one or two colonies engaged in robbing. But it affects the whole apiary, for when that bit of honey is gone the robbers set out in quest of more spoils, and every hive in the apiary is likely to be tried. Every colony is alert and on the defensive. If any are weak, or poorly protected, look out for them. If the robbers seem to be getting the better of them, stop up all cracks where a bee can get through, and close the entrance, leaving only room for one or two bees to pass at a time. Then throw an armful of hay or straw over the entrance and soak thoroughly with water. That will dampen the ardour of the robbers, as they do not like to crawl through the wet hay, and they will most likely give up the fight. Under no consideration open any hive at such a time, for the robbers will be ready to pounce in if you do.

You can very easily start robbing working with the bees without leaving any honey exposed when there is a dearth of honey. If you are inexperienced they can get quite a start before you realise that they are robbers. If on opening a hive you see some bees flying with quick, darting motions, trying to get in; or if you see a bee alight on a comb, and it is promptly seized by one or more of the bees of the colony; you may be sure they are not honest bees; and if at the same time the bees of the colony you are working at are angry and excited, stinging without apparent provocation, you may be sure robbers are at work, and you would better close up operations, no matter how anxious you are to work. The only safe way to work at such a time is under a tent, where no outside bee can get in

its work. Sometimes, by leaving the apiary undisturbed for a few hours, things will quiet down and you can go to work again. But you must be on the alert, and at the first sign of robbers you must be ready to close up promptly.

If a frame of brood or any honey has been left exposed, and the bees have got started on it, do not take it away from them and leave nothing in its place. If you do they will probably pounce on the nearest hive and there will be a royal battle. You can take it away and put a comb without any honey in its place, or one that has a very little in it. That will satisfy them.

Dr. Miller often tells me that I am not as afraid of robber-bees as I should be. We have never had a very bad case of robbing—at least, none that ended very seriously. The most we have suffered from robbing is having weak colonies robbed out in the spring. But they have got started enough a number of times to show what they might have done if we had not been able to control them.

A year or two ago Dr. Miller was called up in the middle of the night, and asked if he would not come and straighten up a man's bees. The man lived some six miles away. It was his hired man that came for Dr. Miller. He said that several hives had been knocked over, and the man had been so badly stung that he had had to go to bed, and send for the doctor, and there was no one else that could touch the bees. Dr. Miller told him that he could not do anything until daylight, but that he would come early in the morning.

I assure you it was a scene of desolation that we looked upon when we reached that apiary the next morning. He had quite a little apiary, had kept bees for years, but I imagine he had never had such an experience before. He had tied a young calf, with a rope long enough to reach the bees, to an apple tree near the apiary. The bees stung the calf, and the calf commenced a mad race among the hives, as far as the rope would allow him to go, overturning hive after hive. In some cases the combs had been thrown entirely out of the hives, and it looked as if the calf, in its mad career, had run over them several times. Broken brood-combs filled with nice brood, combs of honey, bees and sections, were in a sad mix-up, and the bees were fast waking up to the fact that there was plunder to be had.

We straightened things up as best we could, got the hives back on their stands, and whenever it was possible we tied the brood or honey into the frames that were left whole; put the bees back into the hives where we thought they belonged, &c. Fortunately, there was not much honey in the sections, so that simplified that part of it somewhat, but it was a little the worst wreck I had ever had anything to do with.

I think that man has had his lesson. I do not believe he will ever tie any animal near his apiary again. But it was expensive.—EMMA M. WILSON in *American Bee Journal*.

Queries and Replies.

[2866.] *Taking Bees to Forage.*—As a constant reader of your valuable paper, the BEE JOURNAL, for the last ten years, I beg to request an answer to the following:—1. I am very anxious to obtain some trifolium honey, there being a splendid plant of about 14 acres within a mile from my apiary, and, as I have the chance of placing three stocks in a friend's garden about a hundred yards from the field mentioned, with acres of sainfoin and some 16 acres of red clover adjoining, do you think I should gain anything by taking the hives there, thus saving the bees the flying distance? 2. Should I be likely to get it pure if I had the three stocks just right for supering at the time the trifolium was coming out in bloom, being earlier than either the sainfoin or clover? I should, of course, give worked-out shallow frames. 3. Can I move them now the distance without losing many bees, as they have not been flying very strong for the last ten days, being so cold? 4. Is trifolium honey considered good enough for the show-bench, or is it better mixed with sainfoin or red clover? 5. Do bees get much honey from red clover?—W. NORRIS, *Bradford-on-Avon, May* 19.

REPLY.—1. You will certainly add to the weight of surplus-honey by planting the bees right on the forage-ground; the point is, will the expense of carting the bees to and fro not more than counterbalance the value of the extra honey obtained? It, therefore, becomes more a question for yourself to consider than outsiders like ourselves. 2. Yes, if the plant is yielding freely the bees will work almost exclusively on it, so long as the bloom lasts. 3. Yes. 4. Trifolium yields honey inferior in quality to either sainfoin or white clover, the last-named plant being the best grown in this country for high-class flower-honey. 5. No.

[2867.] *Diagnosing Foul Brood.*—I am sending, under separate cover, two samples of comb believed to be affected with foul brood. The whole of the frames are similarly affected, but the stock of bees from which samples were taken are very strong, and they are building queen-cells. 1. The samples smell very bad, but the capped brood seems healthy enough; it is the unsealed larvæ that appears to be affected. I should be glad to have your opinion on this through the BEE JOURNAL. 2. Is this a case of foul brood, and if so, would you advise treating according to instructions in "Guide Book" or destroying same?—FOUL BROOD, *Bucks, June* 2.

REPLY.—1. We are surprised at your description of brood in hive referred to, if the

pieces of comb sent are fair samples of what were examined by yourself. So far from the capped brood being "healthy enough," we find that not a few sealed cells contain unmistakable signs of foul brood in an advanced stage. There would surely have been no mistaking the "brown, ropey substance" so characteristic of the disease if the cells had been probed. On the other hand, the unsealed larvæ was in a much earlier and less pronounced stage of the disease. 2. If the bees are really so strong as stated, and building queen-cells as if about to swarm, we should let them swarm. If they do so, keep the swarm in the hiving-skep for twenty-four hours before putting the bees in a frame-hive on foundation (starters only). Then remove the worst of the combs in parent hive and burn them, leaving the bees on about five combs until twenty-one days after issue of the swarm. All brood not diseased will then have hatched out, and the bees and young queen (if safely mated) may be united to the swarm, and all old combs burnt.

[2868.] *Buying Worthless Stocks of Bees.*—A beginner who obtained a stock a month ago has had the misfortune to lose the bees. The hive was carried by rail ten miles to its present position. It is a single-walled standard frame one. I examined them the day after arrival, as the bees did not come out much, and found them weak, with little or no brood, but some honey, which I uncapped and placed on top of frames. On two days this week I was told there was great commotion, "as if the bees were about to swarm," and sometimes three bees were seen struggling with one. On being told the hive was empty (I live some miles away) I examined it and found the bees gone. There were none dead, neither in nor around the hive. The enclosed piece of comb contains half the brood found in the hive. The heavy rains had gained entrance and nearly soaked the quilts. The combs were dry. The bees were supplied with syrup, which was not taken very well till the last day, when it was seen that other bees came and devoured it. 1. From this evidence, is it a case of robbing? 2. What brood does comb contain? And is it free from disease? 3. Does comb always become so dark coloured as sample? 4. If not a case of desertion, did the queen most likely die during removal? Pollen was carried in last week. What does this show, if queen was dead? 5. Is there any association in this district? I have read the "Guide Book" since January, with the JOURNAL every week, but, like my friend, have only had the bees for a month.—E. M. MARSHALL, *Howood, N.B., May* 31.

REPLY.—1. A clear case of "robbing out" a weak and practically worthless stock. 2. Only drone-brood in worker-cells. There is no worker-brood at all in comb, nor is there any trace of disease. 3. Comb always becomes dark with age. 4. There could have been only a worthless queen or a fertile worker in the hive. 5. None that we know of.

[2869.] *Dealing with Fertile Worker.*—I have four stocks of bees in frame-hives. No. 1 very strong; No. 2 covering five frames; No. 3 covering two frames; and No. 4 covering only half a frame. I find No. 2 contains a fertile worker (according to the "Guide Book"), there being brood standing out very prominently and not compact, while a number of drones are hatching out. I have seen the queen of No. 3, but there is no brood. In No. 4 is an imported Italian purchased last year in this country as a 1901 queen. There is no brood in this, although queen seems all right. Will you kindly say how I can best deal with No. 2, seeing that Nos. 3 and 4 are each in a weak state. I have just supered No. 1 and do not care to interfere with that as it seems like doing well. Nos. 1, 2, and 3 hives stand 3 ft. apart, while No. 4 is 12 ft. away from No. 3.—G. W. F., *Wolverhampton, May* 29.

REPLY.—We really cannot advise you to utilise the queens of either Nos. 3 or 4 in requeening No. 2. The queens of both stocks named must be practically worthless if they have not started breeding yet, so we should buy a good fertile queen for No. 2.

[2870.] *Hiving My First Swarm.*—I am a beginner in bee-keeping, and to-day tried to hive my first swarm. They settled on a currant-bush a few yards away from the hive, but only stopped a minute or two, and then rose and clustered again on a straight upright branch at the top of a tall thorn hedge about 100 yards off. I sawed the branch off, but two-thirds of the bees dropped from it during the operation and fell into the hedge and clustered in three different places. I put the bough with remainder of bees close to mouth of skep, and they went in, the other bees joining them after a time. I then carried them to my new frame-hive—fitted with full sheets foundation—and about 4 yards from parent hive, and hived them by throwing the swarm out in front. The bees marched in at once, but were no sooner in than they poured out again pell-mell and returned; all entered the original hive from whence they had swarmed. I should be obliged if you could explain why they did not stop in the new hive. —"DISAPPOINTED," *King's Lynn, May* 30.

REPLY.—The probable reason is that some mishap has occurred to the queen after issuing with the swarm. It may, however, be that the queen did not leave the hive with the swarm, in which case the bees would be sure to return to the latter as stated.

[2871.] *Queen Cast Out in Spring.*—Will you please tell me through the B.B.J. whether enclosed bee is a queen? I found it outside the hive this morning, with five or six bees clustered on it. The hive in question is in a bad way owing to scarcity of food. Three

weeks ago, when examined, there was plenty of honey in the frames, but on Wednesday, 21st, I found the bees nearly all dead, and not a drop of honey in the hive. If enclosed is a queen, would it be advisable for me to unite remaining bees with the first swarm I get, as I have one hive that will swarm very soon. I thank you very much for your "wire" *re* foul brood. It was a relief to me to know that I was free from that pest. Hoping for an early reply.—T. MITCHELL, *Eastbourne, May* 26.

REPLY.—The bee sent is a queen, and the deplorable condition in which the bees were found is due to the exceptionally adverse weather for several weeks past. With regard to the few bees left alive, it is hardly worth troubling to save them. You may, of course, shake them on top of your first swarm when hiving the latter, but, unless the swarm is located on the stand the few bees you propose to utilise have occupied, most of the latter will return to the old place and, finding no hive there, will be lost.

Echoes from the Hives.

The Woodbines Apiary, St. Brelades, Jersey, C.I., May 24.—Every bee-keeper in the Channel Isles doubtless is more than thankful for the rise in temperature and an increase of sunshine, which (after a very wet and boisterous spring, the coldest on record for many years) has now brought forth the bees in energy to make up for lost time, and as the foliage and flowers have largely increased during the past week, so has the machinery in the hives been speeded up to its utmost pitch to cope with the greater quantity of raw material brought in to be manufactured into honey, so much so that the hives of the happy workers has been heard till late at night, overtime being willingly made, whilst the master has been obliged to add at least one, and in some instances two, stories, to the fabric to accommodate the accumulating stock of the finished article now being sealed up for future orders which are to balance the books when stock-taking time comes round again. May it never fail to do so.—W. W. K.

Ballindalloch, N.B., June 2.—May has been a miserable month all through. Only on two days have bees got any pollen-carrying done. Breeding must be almost at a standstill for want of this indispensable commodity, but weather is still so chill and wintry that hives cannot be opened for examination. It is safe to predict that we must have a late season, as colonies are now little in advance of what they generally are at the end of April. What a contrast to the delightful month of May we had last year! Let us keep up our hearts, however, for "to-morrow the sun may be shining, although it is cloudy to-day." June has opened most inauspiciously, with a cold, wintry nor'-easter blowing strong, accompanied by heavy rain. For "imitating" in last par of last "Comments" read "initiating."—D. M. M.

PRESS CUTTING.

TIT'S NEST IN A BEEHIVE.

A few days since, the expert of the Oxfordshire Bee-keepers' Association was examining a frame-hive containing a fairly strong stock of bees, in a member's apiary at Shennington, when he found a tit's nest, containing ten eggs, built behind the division-board. The top of the hive was a little defective, and the birds had gained access thereto through a very small aperture.

Bee Shows to Come.

June 10 to 13, at Reading.—Royal Counties Agricultural Society. Bee and Honey Department under the management of the Berks B.K.A.

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Thirteen classes, with liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 18.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. Schedules from John Maughan, secretary, Blake-street, York. **Entries close June 28.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22, Leam-street, Leamington. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Ludwig, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and Dis-

trict Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 6s., and 2s. 6d. Schedules from W. W. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

WATLINGTON (Downham Market).—*Beginning Bee-keeping.—Bees Fighting in "Patent Hive."*—We cannot quite tell what is meant by your having "about two months since bought a patent hive well-filled with bees." If, as we expect, a "bar-frame hive" is meant, you must not suppose that the hive has anything to do with the bees being found fighting and killing and turning out some like sample sent. The latter are full grown and lusty drones, killed and cast out because food is scarce; that is all. If intending to become a good bee-keeper, you must get beyond your present very crude and elementary knowledge by procuring a text-book on bees which will explain fully what just now seems a puzzle to you.

F. J. G. (Devon).—*Bee-keeping Neighbours and Foul Brood.*—It does appear hard, almost beyond endurance, when neighbours are found to talk and act as yours do. But at present bee-keepers seem to be helpless so far as regards enforcing destruction of diseased colonies of bees. If the second neighbour mentioned "can," as he says, "cure his bees, no matter how badly they are diseased," you might reasonably ask, Why does he not do it? In any case, however, we advise you to write the hon. sec. of your association, and endeavour to get that gentleman to bring moral influence to bear upon the neighbours who are doing their best to make successful bee-keeping impossible in the locality. The expert mentioned will, no doubt, report the facts as stated in due course.

G. W. FAIRALL (Wolverhampton).—*Joining Bee-keepers' Association.*—The Rev. G. C. Bruton, Vicar of Great Haywood, is hon. sec. of the Staffs B.K.A.

C. R. (W. Malling).—*Time before Queens Lay after Hatching.*—The time occupied varies considerably, seeing that mating may take place in a week or so after hatching, or it may be delayed three or four weeks owing to bad weather. Once mated, however, a queen usually begins to lay in a couple of days. The only thing you can do is to wait patiently for a few days longer, then examine the comb for eggs or young larvæ, which, if seen, will prove queen to be all right.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

R. H. (Salop).—There is foul brood in comb sent, and as this is the most favourable time of the year for getting the bees on to newly built combs by removing them from diseased ones and treating them as a swarm, we advise that course. Full directions are given on page 152 of "Guide Book." On the other hand, if, as stated, there are now

twelve frames covered with bees, "eight of which are full of brood," and only three frames show patches of brood like sample, you might remove these three frames and give medicated food until honey is coming in from outside, as proposed. You do not say if you have any hives beyond the one mentioned. If not, the latter might be the best course to follow, but if healthy stocks are in the same garden we should avoid risk to the latter by destroying all combs and food in the diseased stock.

G. M. (Newport, Mon.).—1. Foul brood is just developing in comb sent. We are glad to hear your seven hives are now "all strong and full as they can hold with bees." Nor do we doubt that the preventives used have had some share in keeping them free from disease, as it may also be the means of checking the mischief in the affected hive. Beyond keeping a strict watch on the hatching brood to see that the disease is not making headway, we advise no further measures at the present juncture. 2. The red insect seen on the bodies of some of your bees is the parasite known as the *Braula cæca*, or blind louse (*vide* "Guide Book," page 160).

(Mrs.) C. D. (Surrey).—Comb is affected with foul brood of old standing. Whether it dates back "more than twelve months" or not it is impossible to say, but it is a bad case, and certainly not "a recent development."

(Mrs.) H. M. P. (Hertford).—1. The dead brood—most of it in the pupa stage—is chilled only. We find no disease in comb. 2. We share your regret that there is no B.K.A. for Herts, but you are not debarred from participating in the insurance scheme in consequence, non-members being admitted to its benefits.

A Learner (Cambs.).—Foul brood is developing fast in comb. There is also some drone-brood in worker-cells, so the stock is evidently worthless.

A. G. S. (Newport, Mon.).—We find foul brood of long standing in comb. Refer to your "Guide Book" for directions how to deal with it.

*** *Several queries and letters, received late, will have attention in our next issue.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

SWARMS FOR SALE, (1901 Queens). A. Hounsom, The Apiary, Bosham, Chichester, Sussex. M 68

A FEW guaranteed HEALTHY STOCKS BEES in Skeps, 10s. 6d. each, packed; 2 young fertile Laying Queens, 4s. 6d. each. Spearman, Colesbourne, Cheltenham. N 8

15TH YEAR.—Still cheapest and best. Garnett's original English Screw-cap HONEY JARS. Six dozen 7-oz., 8s. 9d.; ten dozen 16-oz., 10s. 6d. Free on rail; cash. Garnett Bros., High-street, Rotherham.

Prepaid Advertisements (*Continued*).

SWARMS FOR SALE at 10s. 6d. each or 2s. 6d. lb. F. Barks, Rempstone, near Loughborough. N 2

STRONG natural SWARMS, 8s. 6d. each, boxes free. Hewett's, Laburnum Apiary, Alton, Hants. N 7

FOR SALE, 60 lb. PURE ENGLISH BEESWAX, Sample, 2d. Miss Collin, Kirtling, Newmarket, Cambs. N 4

FOR SALE "Little Wonder" HONEY EXTRACTOR, worked by cog gearing, equal new, a bargain. Wilkes, Sycamores, Pelsall, Walsall. N 1

A FEW excellent SWARMS FOR SALE, 2s. 3d. per lb.; guaranteed free from disease. Higley, Expert, Timberhonger, Bromsgrove. N 6

NATURAL SWARMS, 8s. each, packing, 2s. or returnable. Linstead, Garboldisham, Thetford. N 5

DRONE FOUNDATION MACHINE cheap, or Exchange Honey; offers. Holmes, Brunswick-road, Plymouth. M 99

LITTLE WONDER EXTRACTOR FOR SALE, 4s. Also WAX EXTRACTOR, 4s. 6d. F. R. Court, Green-street, Sittingbourne. N 3

SILVER ENGLISH LEVER WATCH, cost £4 10s. will EXCHANGE for THREE SWARMS of BEES. Also Prize Collies exchange for Bees. Ross, Barkerland House, Dumfries. M 97

PRIME NATURAL SWARMS of English BEES from my selected strain, 10s. 6d., 12s. 6d., and 15s. Travelling boxes free. W. Woodley, Beedon, Newbury.

5 NEW BAR-FRAME HIVES, complete, thoroughly well made; also all necessary appliances. List on application. Giving up bee-keeping. What offers cash? Kitching, Kenwood-road, Sheffield. N 9

TWO STRONG STOCKS BEES. Good Hives, wired Frames, new Section-crate, £1 each. Two Swarms on Wired Frames, 14s. each, warranted healthy. Three Young 1902 Queens, with cage, 3s. 6d. each. Miss Maud Barret, Gevington, Polegate, Sussex. N 12

BARGAINS!! One Wells HIVE, complete with lifts, &c., well painted, Taylors, cost £2 5s. Will take £1 10s. Strong STOCKS on frames, 15s. Three combination hives, 7s. 6d. each, £1 the lot. SWARMS, very strong, 12s. 6d. Lillywhite, Westerton, Chichester. M 96

FOR SALE, Four Strong Healthy STOCKS BEES in bar-frame hives, in good condition, ready for season's work. A few Swarms, healthy, strong, 10s. 6d. to 12s. 6d. each on rail. Quantity worked-out Shallow Frames for supering. Cuttings of White Arabis, 1s. 3d. per 100, post free. Bailey, 55, Park-road, Leek, Staffs. M 98

RED CLOVER QUEENS.—I am rearing queens by best known methods of select breeders obtained from most celebrated raisers in America, whose bees have stored honey in large amount from red clover. I guarantee them healthy, prolific, and to arrive in good condition; price, 5s. 6d. each. J. Geary, Barwell, Hinckley. N 10

GOOD natural SWARMS FOR SALE, 10s. each. H. Holleworth, New Inn Farm, Widmerpool, Notts. M 72

STRONG CANE-BOUND SKEPS, 1s. 3d., 1s. 6d., 1s. 9d., 2s. each; 13 to doz. Cheaper make, 1s. each. J. Cox, Armenack-street, Falmouth. M 71

FINEST ENGLISH HONEY, in ¼ cwt. tins, 6d. lb. Sample 2d. Screw-cap Bottles, 9s. doz. Cash or deposit. Stevens, Latimer Apiary, Chesham, Bucks. M 77

SIX STRONG STOCKS BEES, in new Frame Hives. Warranted free from foul brood. No reasonable offer refused. Mrs. Passingham, Beaumont, Cheltenham. M 84

ENGLISH EXTRACTED HONEY, guaranteed pure, 40s. per cwt.; delivered on rail at Manea Station, carriage forward. Empties returnable. F. Pepper, Victoria-street, Chatteris, March. M 87

ORDERS for June SWARMS. Executed in rotation. 4 lbs. 12s 6d., 5 lbs. 15s., 6 lbs. 18s. Guaranteed healthy and safe arrival. Whiting, Valley Apiaries, Hundon Clare, Suffolk. M 92

STRONG Natural SWARMS, 1901 Queen, 12s. 6d.; second ditto, 1902 Queen, 8s. 6d. Stocks, New Frame Hives, 30s. Guaranteed healthy. Woods, Normandy, Guildford. M 85

Editorial, Notices, &c.

THE INSURANCE SCHEME.

For the information of bee-keepers lesirous of taking advantage of the nsurance scheme, defined on page 181 f our issue of May 8 last, we beg to otify that copies of the form of receipt —issued in lieu of an ordinary insurance olicy—are now in the hands of all ecretaries of county bee-keepers' asso- iations who have applied for them. It herefore now only remains for members o pay the necessary amount over to the ecretary of the County B.K.A. without elay in order to become possessed of the eceipt, which will entitle the holder to ne advantages detailed on the said eceipt, which practically becomes his olicy of insurance.

Non-members of associations must pply direct to the Secretary of the ritish Bee-keepers' Association, 12, anover-square, W., and as the date hen the yearly premiums are due and ayable is "before June 24 in each ear," early application should be made, order that the guarantee may "cover e period from August 1, 1902 (noon) August 1, 1903 (noon)," as stated.

Correspondence.

The Editors do not hold themselves responsible for the nions expressed by correspondents. No notice will be en of anonymous communications, and correspondents requested to write on one side of the paper only and e their real names and addresses, not necessarily for blication, but as a guarantee of good faith. Illustra- ns should be drawn on separate pieces of paper. We not undertake to return rejected communications.

Communications relating to the literary department, orts of Associations, Shows, Meetings, Echoes, Queries, oks for Review, &c., must be addressed only to "The ITORS of the 'British Bee Journal,' 17, *King William- eet, Strand, London, W.C.*" *All business communi- ions relating to advertisements, &c., must be addressed* "THE MANAGER, 'British Bee Journal' *Office*, 17, *ng William-street, Strand, London, W.C.*"

** In order to facilitate reference, Correspondents, n speaking of any letter or query previously inserted, l oblige by mentioning the number of the letter as well the page on which it appears.*

INSURANCE FOR BEE-KEEPERS.

[4793.] With reference to the criticism by r. W. Woodley of the B.B.J. insurance heme in page 222 of the JOURNAL, I can sure him that all the points he mentions had en raised, more than once, at the various eetings held at Jermyn-street. The task fore the committee was to form a scheme combining the smallest reasonable payment from the cottager, the minimum of work from the secretaries, and the largest risk that underwriters would take for the premium charged.

To guide them they did not take this or that man's unsupported opinion, but the experience gained by the actual working of Associations in other countries. They are confident that if the small bee-keepers of the United Kingdom will all pay the "insignificant sum" asked, the scheme will be a distinct success. The members of Associations sometimes complain that little is done for them, but now by merely filling up correctly the printed forms and once a year remitting the counterfoils with the cash to the secretary of the B.B.K., the secretaries of county associations can do a real service to their members, which the members indeed ought to expect them gladly to do.

As to the proportion between the premium and the risk taken—*i.e.*, the 1d. per hive and the £30 aggregate claims per annum for each apiary insurer—that is entirely a matter of business calculation for the underwriters to settle. The Committee have obtained, they consider, very liberal terms. It remains now for all who have the welfare of the craft really at heart to push forward the scheme to the best of their ability. It is a new departure in this country, and when our bee-keeping friends have given us a *living foundation* of supporters upon which to build, it may become possible to carry out other and important ideas, which at present we have not the strength to undertake. The insurance scheme is the nucleus, let it be made into a strong stock.—THOS. I. WESTON, *Vice-Chairman B.B.K.A., June* 6.

COMMENTS ON CURRENT TOPICS.

[4794.] *Here and There.*—Since the advent of rosy June, imitating Gray's "Kindred Spirit"—"His length at noontide would he stretch"—I delight to recline on the verdant carpet now mantling the earth. I do not waste my time in posing "upon the brook that babbles by," but spend it profitably in studying the ways and habits of the bees. I love to listen to the bee hives' busy hum while I drink in the incense of the sweet perfume wafted from their heavy loads as the countless army of bees industriously ply their busy and loving task. It is altogether delightful, and gives life an added zest and pleasure. I wish I could give a picture of the joys of a country life, as described by our present Poet Laureate in his exquisite poem of "Is Life Worth Living?" but copyright forbids. All who can should read it in its entirety, and, as an accompaniment, Robert Buchanan's—

> Oh to be a-roaming
> In an English dell,
> Every nook is wealthy
> All the world looks well.

Then compare this with a companion picture taken from "Darkest Africa":—"Measure but your length on the ground, seat your-

self on a fallen branch, and then you will understand what venom, fury, voracity, and activity breathes around you. Open your note-book, the page attracts a dozen butterflies, a honey-bee hovers over your hand; other forms of bees dash for your eyes, a wasp buzzes in your ear, a huge hornet menaces your face. And yet it is all beautiful—but there must be no lying down on this seething earth. It is not like your pine groves and your dainty woods in England. It is a tropic world, and to enjoy it you must keep slowly moving."

Stray Straws. — The Insurance Scheme seems a fairly good workable proposal. Single hives should not be dealt with; they should be treated in tens or fractions of tens —the charge for the smallest number being 1s. If you wait, however, till everybody is satisfied, you may as well at once throw it into the W.P.B. Just fancy a man (query No. 2851) who does not know the true dimensions of a standard frame setting up as a critic of its capabilities, being dissatisfied with it, and anxious to start a new-sized one imported from America! Truly a little knowledge is a dangerous thing! The "Foul Brood" column shows a steady number of queries, and I fear more flow in than see the light.

How to get Bees to Work in Sections.— Unless bees are so numerous that they occupy every comb in the hive, it is folly to expect that they will take possession of surplus-chambers. Many bee-keepers grumble because their bees do not take to sections, but when the hive is examined the marvel generally would be if they did so. At times, however, the complaint may have a slight foundation—in fact, as certain races or strains of bees would rather swarm repeatedly than use the super space so temptingly laid out for their acceptance. Several aids may be named to secure this desired end. 1. Keep all sections extra warmly covered up with an abundance of wraps. Even in mild weather this is advisable, but when the nights are chill these are an utter necessity if bees are expected to leave the warmer precincts of the brood nest. 2. What are known as bait sections help very considerably in getting bees aloft; and where they show a reluctance to enter supers one or two partly completed sections—held over from the former season—are a great attraction. Once got into the habit of ascending they quickly perceive the advantage of storing surplus above in order to give the queen the whole space below. 3. Full sheets of foundation should be inserted in every section, and such scraps of starters as are frequently seen should never be used. Quarter or even half sheets scarcely give the bees a chance, especially as the season advances. This foundation, being made from the finest and purest wax, is a great help to the bees, and it can now be obtained so fine and thin that even the most fastidious taste can scarcely detect any mid-rib when the section-honey is being eaten. 4. Contracting the body box by removing some of the frames throws a large force of workers under compulsion into the supers, but it is not recommended unless in skilled hands. It succeeds at a sacrifice of breeding space, which sometimes reduces the population over much; and it may tend to make the bees prepare for swarming just in the height of a honey glut. 5. But the one chief means of getting bees into section racks and keeping them there is to start the honey season with *strong colonies.* That is a *sine quâ non* if success is to follow the keeping of bees. Fine hives, appliances, abundant forage, settled fine weather are all excellent in their place, and are all important, but none of them will secure a large harvest of surplus-honey unless the stock is a strong and powerful one. Such a colony requires no coaxing or art to induce it to accept and store in any surplus space which may be given, and the bees of such a hive may be relied on if honey is to be found anywhere near, and, provided weather is favourable, to roll in the nectar at a rate which will astonish any who have hitherto been content with weak or even medium colonies.

Swarms in Transit.—Perhaps it is only natural that Mr. Woodley, as a purveyor of swarms, cannot endorse the view I take of the question as a purchaser. He grants a loss of ½ lb. as a minimum on a 4 lb. swarm. This in honey might mean 3d. to the vendor, but to me it would mean a loss of 1s. 9d. in shrinkage of weight of bees. What I contend is that both parties should share the loss. Though I noted the fall in the retail price of swarms, I may mention that of the three English swarms ordered this year two cost me 3s. 6d. per lb. and one 2s. 6d. per lb. I recognise that *bees* are not everything in a swarm.—D. M. M., *Banff.*

NEED FOR ASSOCIATED EFFORT.

ANOTHER "CASE IN POINT."

[4795.] In reference to your editorial in this week's B.B.J. (page 221] I would mention the case of our Association, as reported in B.B.J. May 1, and from which I quote our expert's report, abbreviated as follows:—

"Mr. Gray made a successful tour (visiting 114 apiaries), but most of his time was taken up in treating stocks for foul brood, which had been introduced into the Keswick district nearly five years ago, and seemed likely to ruin bee-keeping altogether. Of fifty-six apiaries inspected, thirty-five were found to be infected; and of 150 stocks, eighty-five were diseased. There were an additional thirteen infected apiaries in districts round about. It was mentioned that the Association will act liberally in the way of helping any bee-keeper who, not having yet joined, may have stocks badly infected."

Now this disaster was all the result of one

bee-keeper's carelessness, and had our association been formed at that time, the moral force it would have brought to bear on that person could hardly have failed to stop matters at the start. As it is, stocks far and wide have been wiped out.

I would mention in reference to what you say as regards "a class of bee-keepers whose view of associated effort is bounded by the limits of their own apiaries," &c., that whilst quite agreeing with what you say, I think it would be impossible for you, familiar with the advantages of association work to realise or put yourself in the place of a man who has kept bees for years with moderate success, on old-fashioned lines, no disease having—it so happened by chance—ever come his way; or in the place of a man who has only kept bees for a few years, but on modern lines as taught by the "Guide Book," B.B.J., &c. The former will never be converted to the advantages of an Association until he has joined and seen them for himself, and if he does not join and disease comes his way, he will terribly regret not having done so. The latter also needs to join before he can really see its advantages. He probably is quite willing and ready to give help to his brother bee-keepers, but these bee-keepers are often of long standing, and do not want his help. And so he refrains from offering it, thinking that, being bee-keepers of long experience, they have nothing to learn, but on his joining an association, and his brother bee-keepers doing the same, he will be surprised to find what a lot of help he has obtained from his "Guide Book," &c., and with which he can assist others. There is also the obvious advantage to himself in joining if only to keep his own apiary free of disease.

Referring to your reply to F. J. G. (Devon) (page 229) our own association has similar cases to deal with, and in one bad instance, where we know there is disease, the bee-keeper will neither join the association nor allow our expert to cure his bees, free of charge, and he will do nothing himself. He has no knowledge of how to treat foul brood, and does *not want to know*. He had seven stocks last summer, and he now only has two, and he had heavy robbing at his apiary last autumn.

He is watching his own bees go down, and cares nothing for his neighbours, or as to undoing all the trouble and expense the association has been put to. If every bee-keeper joined an association, foul brood would be stamped out in two years. — GEORGE M. SAUNDERS, Hon. Secretary, Cumberland B.K.A., *Douthwaite, Keswick, June 7.*

BROOD IN CANDY-BOXES.

[4796.] Referring to the cases reported in the BEE JOURNAL of brood being found in candy-boxes, I may say that since writing you anent this having occurred in the hive of a friend, and also in the hive of a farmer near here—where the candy-box was full of brood when taken off—

With regard to my own hives, I found in two of them, when examined some days ago, that the candy-boxes had brood (both drone and worker) in them. On Saturday last one of these hives sent out a fine swarm, and on Monday, the 2nd inst., the other gave me a very fine swarm indeed. Nothing uncommon in all this, you will say; but on the following day, when putting a box of shallow-frames on each hive, I first examined all the frames of each body-box in the swarmed hives, and although I found the ten frames in both well covered with bees, there was very little brood, and not more than a couple of pounds of honey in either of them. I send my name and address for reference, while signing myself F. M. A., *N. Wales.*

BEE JOTTINGS FROM HANTS.

[4797.] I have for some time past read with great pleasure the gossipy and instructive letters of your correspondents, and I am now endeavouring to make some return by sending you a few jottings of my bee experience of this and last season, and trust a new-comer will not be unwelcome.

The distressing accounts of the loss of so many stocks, owing to lack of food during the recent inclement weather, caused me an anxious moment or two concerning my own, but on reflection I was reassured by the recollection of the state of the hives on my last examination; but to make doubly sure I had a look into all the hives and was glad to find sealed sections or shallow frames in supers, so there was no starvation there.

This wet weather suits our very light, sandy soil, and I have never seen such an abundance of early blossom, from the opening of the croci to the present splendour of the hawthorn. That the bees take full advantage of every bright interval is evident from the sealed stores. I am more hopeful of a good harvest this year than last, which will be a startling statement to many of your readers. Last season we were simply dried up, and I got a very poor return—about 15 lb. per hive, which was in excess of the take of many neighbouring bee-keepers. This year, however, the rains have made things grow splendidly, and a week or twos' sunshine would have a wonderful effect. Though surrounded by heather, I only got a slight trace of honey from it, as there was no moisture at all in the ground when the bloom was out. But to return to the present season; I had a very fair swarm on May 27, which is now doing well. I seem to get a swarm on that or following day every year; and they do well.

About a fortnight ago I had a curious experience. Upon opening one of the hives, which had been supered with shallow-frames above excluder-zinc, there was a procession of

workers, each carrying a dead or maimed drone upwards over the quilts where I had raised them. On examination I found the drones had forced themselves through the excluder and been killed above by the workers; for I threw out from the super at least 100 dead drones, and about twenty others who were jammed half way through the zinc. The superabundance of drones was owing to the transference of combs from a skep to bar-frames last season. *Experientia docet.* One question has been occupying my mind since, viz., how to get rid of these combs in quickest way without losing the brood in them? I am at present working them to the outside to be removed when free from brood. If one took them out and placed them on top of frames, giving access all round, would the brood hatch out in a perpendicular position? [Probably it would.—EDS.]—W. P. GORNALL, *Farnborough, Hants.*

BEE-KEEPERS' ASSOCIATIONS AND "ASSOCIATED EFFORT."

[4798.] You, Mr. Editor, in this week's editorial, have administered a severe but not undeserved rebuke to those bee-keepers (?) who will not make any associated effort for the good of the craft at large, and whose shortsightedness prevents their seeing that what benefits their neighbour must, of necessity, benefit themselves also. But there is another side of the shield that ought, in fairness, to be shown. Bee-keepers' associations, or, rather, their hon. secretaries, are not impeccable. I will relate the delinquencies of one, who shall, however, be nameless. Early in the present year I wrote to the hon. secretary of the B.K.A. for the county in which I reside, expressing my wish to become a member, and received in return a copy of a previous year's "report," prize schedule, and entry form complete. This led me to suppose that there would be a honey show held during the present year. Alas, a vain delusion! Not only will there be no show, I find, but the prize-money due to exhibitors at the last is as yet unpaid!

Not knowing this at the time, I forwarded my subscription, and asked that the expert might pay me a visit in the spring. Many weeks elapsed, and a second letter had to be written before the receipt of the money was acknowledged, and then the secretary informed me that he would visit me himself "as soon as the weather broke." Now, sir, here we are in the middle of the honey flow, with hawthorn already going out of flower, and clover and sainfoin fast coming on, but no sign of either this gentleman or his expert (indeed, I understand that the latter does not exist!) have I seen, and evidently, for all he knows or cares my comb might be rotten with foul brood, my stocks dwindled to vanishing point, and the whole thing generally at sixes and sevens. It is treatment such as this that makes the bee-keeper ask, and rightly ask "What do I get for my money?" And reflection answers, "Nought!" I enclose name and address, neither for publication, and sign myself—APIS, *June* 8.

A VISIT TO THE ROOT'S.

BY F. W. L. SLADEN.

The name of the A. I. Root Company is well known in connection with bees and bee-keeping appliances throughout the world. It was my privilege to spend about a fortnight at their establishment last September.

Mr. A. I. Root, the founder of the firm, was unfortunately away when I called, and I was very sorry to miss him. He has, however, ceased for some time to take any active interest in the bees, and his mantle has fallen upon his eldest son, Mr. Ernest R. Root, who presides over the business and edits their well-known bee journal, *Gleanings in Bee Culture. Gleanings*, as it is called for short, is issued twice a month, and its pages teem with up-to-date information about bees and bee-keepers in America. It is printed and published at the Root factory. Mr. E. R. Root was also the President of the United States National Bee-keepers' Association last year, and it was a very great pleasure to me to meet him, for I have seldom conversed with a man who is so well up in the practical side of bee-keeping as he. He was, of course, exceedingly busy, and it was not often I could get a conversation with him in business hours; but when he could spare the time I obtained more information from him in a few minutes than I did in many days by other means.

Our conversations often took turns which specially interested me. One of these was when we chatted on the different British and American names for the same appliances and parts of hives. In America the roof of a hive is called a "cover" and the floor a "bottom board." Mr. Root thought that the British terms for these parts were good, and spoke of making an attempt to adopt them in America. The photo which accompanies this account was taken from the roof of one of the factory buildings. It is of the Root Company's apiary. There are about 500 hives, which are all kept for queen-raising. Each hive has a grape vine trained to a post growing in front of it to shade the bees from the hot sun, and when I was there (in September) the vines were laden with ripe grapes hanging in large tempting-looking clusters. They were small black grapes, and had a very nice but peculiar flavour something like that of an alpine strawberry, and they were so abundant that the factory hands were allowed to buy all they could eat at from 2 cents to 3 cents (1d. to 1½d.) per pound. During my stay at Medina I spent a great deal of my time in the apiary, and was able to compare notes with Mr. Wardell, the

apiarist, on many little details in queen-raising. The trees shown behind the apiary are of some rapid-growing species of spruce, and form an excellent protection from strong winds. In the corner of the apiary to the left is a two-storied octagonal bee-house, built originally, I believe, by Mr. A. I. Root himself. No bees are now kept in it, and the lower part is used as a honey-house. It is covered with vines, which bear deliciously flavoured grapes. Behind the trees, the house in the centre is that of Mr. A. I. Root. It is a very pretty and substantially-built red brick house. On the extreme right is Mr. E. R. Root's house. It is built of wood in one of the numerous tasteful designs so common in America. Just beneath it in the foreground is a portion of the factory buildings. Several

The factory is a veritable hive of industry. Sections, foundation, hives, frames, honey extractors, and a thousand other articles of use to bee-keepers are manufactured, each in their own part of the large buildings. The sections are cut by machinery out of ⅞-in. basswood, and five long strips are cut at a stroke. These are passed through a sanding machine, by which they are polished, and in undergoing this process they become quite hot. The next machine they are passed through cuts them into the correct lengths; in this machine they are dovetailed and have the bee-ways cut out.

In another machine they have the V-joints cut in each of them singly, and from here they are passed on to a table, where they are packed in cases of 500 each, which are branded on the outside with the number, size, and

APIARY OF THE A. I. ROOT CO., MEDINA, OHIO, U.S.A.

white telephone poles are to be seen standing amongst the trees.

On the extreme left (not shown in the picture) are the Root Company's extensive stacks of lumber. This consists chiefly of basswood (the American lime tree) and white pine (Weymouth pine), cut up into boards about an inch in thickness. The former wood is used for making sections and the latter for hives. Mr. Root told me that the pine forests are getting scarce, and that some day it may be impossible to make a hive of 9-in. pine at a moderate price, and that 6-in. or even narrower widths may have to be used. Both the basswood and pine emit a pleasant odour when drying, which to new-comers like myself is noticeable throughout the town of Medina. The bees in the apiary live constantly in the scent of the pinewood, and under the vibration of the factory machinery.

shape. The 4¼ square "plain" or "no way" section seems at present to be the most popular section in America, but the sales of the new tall sections have increased the fastest lately, and it looks as if they will be a good deal "to the front" in the future. To every wood-working machine in the factory there are suction-pipes, which carry the sawdust, &c., to the engine furnace. This also burns odd snaps of wood, &c., and very little coal is used. I did not learn the number of hands employed in the factory, or the annual output of goods, but I believe I am right in saying that it is the largest establishment of its kind in existence, and the goods are supplied throughout the world.

Medina is a small town of about 2,000 inhabitants, and the only industry of importance in it is that carried on at the Root factory. The town is situated about thirty

miles south of the city of Cleveland, which is on the southern shore of Lake Erie. The country around Medina is moderately flat and very fertile and well cultivated. If it had not been for the presence of fields of maize, the peculiar wooden fences, sidewalks, and houses, the wide, rough roads, and the numerous tall, slightly-crooked telephone poles, and the absence of neatly-trimmed hedges, it might have been English country. The weather during the fortnight I was there (at end of September) was continually sunny and calm every day with the exception of one day, on which rain fell. The days were much hotter than ordinary English summer days, but the nights were cold. The maple leaves were beginning to turn colour; the bees were, however, still gathering a little honey from wild-aster (=Michaelmas daisy) and white melilot, both of which plants grow wild in abundance.

Queries and Replies.

[2872.] *Bees not Working in Sections.*—I have supered a hive, and the bees have taken to the middle sections, but they have not begun drawing out the combs yet. They hang in compact clusters on the face of the foundation, but do not draw it out. 1. Does this show that the brood-chamber below is getting crowded, and that the bees will soon commence comb-building in the supers? 2. The hawthorn hedges about here are a mass of bloom; there is any amount of it everywhere around, and the air is quite heavy with its perfume. Do you think I shall get any honey in sections from this source if the weather is good?—J. L. Saxby, *Walton, Liverpool, June* 2.

Reply.—1. You may rely on it that when honey is abundant the bees will soon start comb-building and storing. They are simply waiting for suitable weather to begin work. 2. The honey yielded by the hawthorn is good when mixed with that from other sources, but if gathered entirely from hawthorn it is rank and rather unpleasant in flavour.

[2873.] *Buying Diseased Stocks of Bees.*—On Friday last I was asked by a friend to look at his bees, of which he had three stocks. Two of them are in frame-hives purchased last autumn, and the remaining one in a straw skep bought about three weeks ago. I first looked over the frame-hives, in one of which the bees were dead, and in the other they were in a very weak state. The bees in the skep seemed to be strong and healthy to all outward appearance. On further examining the last-named frame-hive I found it in a very dirty state, the combs containing a lot of dark-coloured honey with the exception of two or three frames, in which there was some brood and about a couple of handfuls of bees along with the queen. I came to the conclusion that this hive had foul brood, and I cut away a piece of the comb and secured the queen-bee and a few of the workers. I am now sending these on to you per post, and should feel much obliged by having your opinion as to whether I am right in thinking that they are diseased. My friend wished to transfer the bees in the skep to a new frame-hive. Would he be right in doing so if the bees I have sent on turn out to have foul brood? I send my name and address and sign myself —A Bee-keeper, *Glos., May* 5.

Reply.—Comb received is badly affected with foul brood of long standing. It shows that the seller is either ignorant of the infectious nature of this bee-disease, or was much to blame in selling the hives referred to if aware of it.

[2874.] *Dealing with Weak Stocks in Early Summer.*—I began bee-keeping last year by obtaining a swarm from a skep. This year the bees are very weak—only about half a frame of brood and a few eggs. I have looked for the queen, but cannot find her. There is no drone-comb in the hive. 1. Is this because the queen may be old? 2. I have ordered another swarm. Could I raise a new queen from this? I have always kept a few pieces of naphthaline in the hive.—D. Chapman, *Beddington, Surrey, June* 3.

Reply.—1. Various causes may account for the poor condition of the stock, and nothing but personal inspection could enable us to give a definite opinion, but it certainly looks as if the queen is at fault. 2. Not to be of any service to the weak stock, and it would be bad bee-keeping to try it. You had best regard the weak lot as not worth saving, and get to know if the hive in question is free from disease before taking any steps to even try to preserve the bees and combs.

[2875.] *Insect Nomenclature.*—On opening one of my hives on Saturday I found what looked like a long-shaped lump of clay sticking on the top quilt, but on closer inspection it proved to be a nest, built in chambers, and containing eggs and yellow stuff. I send you what remains of it (it got damaged in taking it off the quilt). Can you tell me what it has been? I hope it will not arrive too broken for you to be able to tell what it was.—E. M. G., *Claygate, Surrey, June* 4.

We referred the above query to our esteemed contributor Mr. Sladen as an expert on insect life, and he sends the following reply:—

The clay-cells are those of some species of wild bee. The "yellow stuff" in each cell is pollen, and the eggs you saw are those of the parent bee, who also constructed the cells and stocked them with pollen. Her work could scarcely have been finished at the time you took the cells, and if you had then watched the hive, no doubt you would have seen her return and could have secured her. Without

seeing a specimen of the bee that did the work we should not like to hazard a conjecture as to what species it was. The workmanship of the cells is very delicate, and being in such an unusual place, it is reasonable to suppose that the bee may have been a rare kind. It is possible that other similar cells are in course of construction in other hives or in similar places near by.—F. W. L. S.

[2876.] *Transferring Bees.*—I am a reader of your BEE JOURNAL keeping a stock of twenty hives. They are straw hives, with moveable frames, of Dutch construction (Gravenhorst). But this year I want to transfer them to Belgian wooden hives (Dadant). Will you kindly give your advice as to best manner and time to do this? I will also be obliged if you will send me a copy of the "Guide Book" as soon as possible.—(DR.) F. VAN EEDEN, *Walden, Bussum, Holland.*

REPLY.—If it be at all possible to transfer the bees from their present straw hives to the more modern frame-hive by the method described on page 140 of "Guide Book" (which latter has been duly forwarded as desired) we advise you to follow the plan there detailed, *i.e.*, to allow the bees to transfer themselves to the new hives. The task of cutting out the combs of twenty hives—largely occupied with brood at this season—and tying them into the "Dadant" frames with tapes is a task few would care to tackle, and, even if successfully got through, the result would be incomparably worse than having straight new combs built in the new hives from full sheets of foundation.

[2877.] *Dealing with Diseased Stocks.*—Thank you very much for reply. Will take your advice and get a fertile queen at once, as I have examined the hive this morning and found the queen-cells started and two already sealed over. 1. Will you please now tell me if there is foul brood in comb sent? About a week ago I thought there was a strange smell about this hive, and on looking it over I found comb as sample sent. It is strong in bees, and has lots of brood, so much so that I have put sections on, as the bees seem to need room. If diseased, what shall I do with it? 2. I have fed all my stocks with medicated food, and always keep naphthaline in them. A neighbour of mine keeps bees, and I know she has foul brood in them, but she will not destroy her bees, though they are weak and worthless. I always supply her with naphthaline, because she and I are neighbours and bee-keepers. I am afraid you will say this one of mine has it, but surely it does not follow all of mine must get the disease, does it? 3. I keep my alighting boards washed with carbolic acid solution; is this any good? Thank you for your great patience with my inquiries. It is most good of you week after week to answer the ignorant questions of your readers.—P. HAMSHAR, *Sussex.*

REPLY.—1 and 2. There are slight signs of incipient foul brood in comb, which tends to show that the disease is kept under control by the use of preventives named. As we have to deal with both samples of comb sent at intervals some days apart, we are rather surprised at second sample, for while indicating the same "slight signs" as the first, the latter contains little besides drone-brood. If there is too much of this it should be cut out before putting on surplus-chambers. With regard to question, "What you must do?" we advise letting the bees do their best in honey-gathering while the season lasts; then, after removal of surplus, examine the brood-combs in lower chamber. If the brood looks suspicious cut a piece out and send it on, when we will advise what steps to take in the early autumn. 3. It is always "good" to use disinfectants about hives when disease is suspected.

[2878.] *Dealing with Swarms and Swarmed Hives.*—Just a line or two to let you know that I got a big swarm yesterday from my straw skep, extending about 2 ft. in a cluster in the hedge near by. This makes me write to ask what I should do with the bees remaining in the skep, as I do not wish to buy a new queen for them. 1. Should I wait and see if there are queen-cells in the skep before nine days are over, and destroy all except the best one? 2. When the queen is hatched out, and the bees have increased in strength and number, will it be all right if I could put a few sections in box, with roof on top, and place on top of skep? 3. I have successfully hived the swarm, and saw the queen enter all right; should I give a rack of sections to the swarm in about a fortnight from now, or when should I put it on?—GEO. BROOKS, *Rotherham, Yorks, June 3.*

REPLY.—1. Do nothing now; wait the usual eight or nine days, when the skep will most likely send out another swarm, headed by a young queen. Then if increase of stocks is not desired, turn up the skep and remove all queen-cells visible before returning the swarm to skep in the evening of same day. 2. You may get a few sections worked on top of skep if the swarm is returned, but not otherwise. 3. If weather keeps fine, and you confine the swarm to about seven frames, a rack of sections may be put on in ten days if honey is coming in well.

[2879.] *Diagnosing Foul Brood.*—As a reader of your valuable journal, I should feel greatly obliged if you will tell me whether there is any trace of disease in the bit of comb sent herewith. It was cut from the feed-hole of a straw skep, the bees of which seem lazy and disinclined to work, thirty or forty usually clustering about the entrance. 2. Why is this? If you cannot pronounce on this, I will send more with brood in it. There is brood in the hive.—ERGO, *Leicester, June 4.*

REPLY.—1. A bit of comb cut from the feed-hole of a skep could not possibly be of

any service in deciding with regard to foul brood. Send on a bit of comb—just as cut out—containing recently sealed or unsealed larvæ. 2. The bees clustering so as to cover the entrance would tend to indicate a through-draught which the bees are endeavouring to prevent. Is the feed-hole at top well covered? If not, let it be done, so as to conserve the warmth of the hive.

[2880.] *Bees Robbing in June.*—I have to-day under different cover sent you a small piece of comb taken from one of my four stocks. At the commencement of the season the stocks were all equally strong, but noticing vigorous attempts (chiefly unsuccessful, the bees holding their own) made by the other hives to rob the one under notice, and the large amount of fighting, I became suspicious and have been closely watching the hive. The comb looks healthy to me, and I saw a young worker-bee emerge from a cell. A short note in B.B.J. as to whether healthy or not will greatly oblige. If healthy, the continued weakness of stock must be due to the queen requiring replacing, as the bees are not too thick on nine frames, whilst the other three are full up on ten frames and also in the supers, the latter being more than half full and a number of sections completed and sealed. I should, in this case, put a cast into the hive, first removing the queen, which would provide a fresh queen and also bring the stock up to full strength, and would then super at once.—T. A. Williamson, *Abergavenny, June* 3.

Reply.—The dead brood in comb sent is "chilled" only. There is no disease.

[2881.] *Uniting Swarms to Queenless Bees.—Helping Beginners.*—Can I unite a fresh this year's swarm to a hive that has, I suppose, no queen or only a worn-out one? Upon opening the hive and looking at the combs I found numerous drone-cells and a very villainous collection of drones. There was no worker-brood, but a quantity of newly-gathered very clean honey-comb filled with honey. I am surprised at the quantity of honey. The comb taken out was quite soft, and with difficulty held together so that we could place it on a dish. I do not like the plan of placing a skep over brood-frames. I have several so from last year, and they are a trouble to me.—H. W. C.

Reply.—We print above query as written partly to show how difficult it is to make out what is really meant by correspondents who, as beginners in bee-keeping have evidently not yet mastered the most rudimentary principles of the craft and who are not regular readers of this journal. For the rest we must inform "H. W. C." that letters addressed to our publishers, Messrs. Kent & Co., without sending either name, address, or even date, are, according to rule, ineligible for publication. We hope, however, by securing "H. W. C." as a subscriber, to be of some assistance; but he must take the trouble to make himself clearly understood when writing, or we cannot help him at all. First, then, the bees, if they are queenless, or headed by a drone-breeding queen, are not worth the trouble of uniting to a this year's swarm. They would be of no practical advantage to the latter, and might cause mischief. On the other hand, it is quite certain that if the hive had in it when examined recently, "a quantity of *newly gathered*; very clear honey-comb (whatever that may mean) filled with honey" in surprising quantity, there must be some error in your description of the hive and its contents. Anyway, there is a mistake somewhere, for it is safe to say that bees in helpless condition stated, would neither build new comb nor gather "large quantities" of honey. Under the circumstances, we will be very pleased to reply further if the hive and contents are carefully examined and correctly described.

[2882.] *Supering Diseased Stocks.*—I shall be much obliged if you can give me your advice under the following circumstances:—There are seven bee-keepers within a quarter of a mile radius here. I find that one has five stocks, all of which are affected with foul brood in every comb; three of them are strong in bees, and I have put sections on these three. The owner is willing to have them all driven, starved, and disinfected, and renew frames, if you think it the wisest course to pursue. The three being so very strong in bees, I thought it might do to let them go on for a month or two to see if they will store honey, as white clover is always plentiful around here. I will then treat them all after the honey-flow. If they were my own I should treat them at once, but I will await your reply, as I have always found you give sound advice. I cannot understand how the bees are so strong, and yet much of the larvæ seems to be all dead and decaying in the combs, and very few sealed over or in a white, healthy condition, as my own are. I think they are about at their strongest now, and will dwindle down as time goes on.—Constant Reader, *Kendal, June 7.*

Reply.—We consider you have taken the best course under the circumstances, because our own experience has proved that a strong lot of bees, even if affected with foul brood, will at times gather a good harvest of surplus honey. In one case, to our knowledge, the bees, though unmistakably developing foul brood, became thoroughly cured at end of the season, and yielded well of surplus. Of course, these cases are the exceptions that prove the rule, and it would be folly to pay too much attention to them. They are, however, none the less true.

[2883.] *Recrudescence of Foul Brood: An Object-Lesson.*—I shall be indebted if you will pass verdict through the Bee Journal on the

enclosed piece of comb taken from hive that had foul brood two years ago, but was clean and prosperous last year. There has been a lot of "chilled brood" found in hives around here through the late inclement spring, but I am afraid the sample of comb reveals a case of the old disease breaking forth again.—W. E. R., *Driffield.*

REPLY.—There can be no doubt that yours is a case of recrudescence of disease, though long dormant. The recently sealed and unsealed larvæ show that foul brood is rapidly developing, while in one or two cells with thick, sunken cappings we find the ominous speck of dried-up brown matter containing spores in myriads. This is just the risk so difficult to get rid of without destroying diseased combs outright, because the sealed cells are harmless while they remain covered with a thick capping of wax, but when a season of scarcity occurs like the present one bees go hunting over possible cell where food may be, and so release the spores of the disease, and thus spread the mischief.

[2884.] *Swarms Coming Off Unseen.*—I had a very large swarm from one of my hives on Friday last, but as I did not see it issue I am in difficulty to know which hive it came from as they are all still so full of bees. The one from whence I think it came I have examined and find no queen in it. I have always understood that the young queen came out as soon as the swarm left, but there was an empty cell and some sealed over, all of which I removed, being afraid that through inexperience I may have overlooked her if she was only young, and I did not wish to run the risk of "casts" issuing later. 1. Kindly tell me if I have done the right thing, or, if not, what I should have done? Another hive, although thick with bees on combs, built from new foundation recently given, has now honey sealed over on the top of each frame, but there is not a trace of queen, brood, or eggs, though I saw the commencement of a queen cell. I have taken a frame from another hive, with, as far as I could judge, brood in all stages and given it to them. 2. Will they be able to raise a queen from this, and have I done the correct thing? The bees seemed quite normal in April, when they were cleaned, perhaps not quite so strong as rest, and were given several new frames of foundation in place of very old ones. I have been feeding steadily to get them in good condition. An early answer will much oblige in case I have erred. I fear there is no chance of a visit from expert yet as weather has prevented his visit twice.—IRIS, *Epsom.*

REPLY.—1. If the empty cell showed plain signs that a queen had hatched out from it quite recently, you have done right, and may be fairly sure there is one in the hive. 2. As the bees "seemed normal" in April—when you, perhaps incautiously, gave several frames of foundation—and are now evidently queenless, it is probable some mishap occurred to the old queen at that time. You must now examine the frame of brood given, and see what progress has been made by the bees with regard to queen-cells, because it is never quite safe to assume that queens will be raised from brood so given.

Bee Shows to Come.

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Thirteen classes, with liberal money prizes and silver medals. Schedules from R. Godson, Hon. Sec. Lincs. B.K.A., Tothill, Alford, Lincs. **Entries close June 18.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. Schedules from John Manghan, secretary, Blake-street, York. **Entries close June 23.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22, Leam-street, Leamington. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fete in "The Quarry." Bees, Honey, Hives, and Appliances. Six Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which

recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes**, including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** A well-known artist connected with periodical literature, who has recently become a bee-keeper, kindly sends the following welcome information regarding one whom all bee-men will hope to see become a successful bee-keeper. He says :—"One of the latest recruits to the ranks of bee-keepers is the well-known author, Mr. Rudyard Kipling, who has just installed his first hive in the garden of his house at Rottingdean, near Brighton.—ANIMO ET FIDE.

M. I. A. (Hants).—*The Bee-keepers' Insurance Scheme.* — The form of receipt published on page 181 of our issue for May 8 fully explains the particulars of the way in which the insurance scheme will be worked. If, therefore, any further information is required—beyond what appears on page 231 this week—application must be made to your county Secretary, or to Mr. Edwin H. Young, Secretary B.B.K.A., 12, Hanover-square, W.

J. L. S. (Clevedon).—*Honey Extractors.*—For those who do not fear the labour of extracting, the "Little Wonder" answers very well; but with many hives at work no bee-man would care to dispense with the cylinder extractor, with its saving of labour and greater efficiency.

W. R. (Cardiff).—*Addresses of Correspondents.*—We cannot undertake to furnish applicants with addresses of correspondents who use a *nom-de-plume* or whose initials only appear. They are regarded as "private" and confidential. If this rule were not adhered to we should probably hear comparatively few reports of foul brood.

F. HAMSHAR (Cuckfield).—*Immature Brood Cast Out.*—When worker brood is cast out in quantity in spring or early summer it is a sure sign that food is short, and that little or no honey is to be got outside. The remedy is to feed at once.

G. W. F. (Wolverhampton).—*Dead Queens Cast Out.*—We cannot very well judge from a dead queen whether or not she is "worn-out," because it sometimes happens that very prolific mothers are by no means promising in appearance. One of the queens sent was a well-grown adult, and seemed all right. The other you had yourself crushed flat in forcing your note into the matchbox, and was useless for examination.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

W. BINGHAM (Cheltenham) and W. MIST (Surrey).—Combs are affected with foul brood. Neither case is a bad one, nor is the disease of old standing.

E. B. A. (Bridgend, Glam.).—There are signs of foul brood in comb, but sample was so badly crushed up as to render examination very difficult.

R. W. BROSCH (Wylde Green).—1. Brood is "chilled," not foul. 2. The brood may have been dead about three or four weeks, and it is far on in development, having reached the imago stage.

A. NIGHTINGALE.—You were quite right in pronouncing the comb to be diseased; it is a decided case of "F. B."

M. TAPLIN (Nettleham, Lincs). — The "specimen" sent is simply a single chilled larva, probably from an outside cell in the hive below the entrance of which it was found. It is no indication of disease at all.

M. WAGHORN (Brighton).—Foul brood is developing in both samples of comb sent.

*** *The crowded state of our Query and Reply column this week compels us to hold over several letters and queries till next issue.*

Editorial, Notices, &c.

GLAMORGANSHIRE B.K.A.

RESUSCITATING THE B.K. ASSOCIATION.

The following circular has been sent to us for publication. Unfortunately, it reached us too late for our issue of the 12th inst., thus leaving but a short notice for BEE JOURNAL readers in the district. We hope, however, that all interested who receive this intimation will make an effort to attend.

Dear Sir, or Madam,—A meeting of those interested in apiculture will be held at the Grand Hotel, Westgate-street, Cardiff, on Friday, June 20, at 8 p.m., with the object of resuscitating the Glamorganshire Bee-keepers' Association.

Chairman: Major-General Lee, R.E., J.P.

Several well-known gentlemen, and also many prominent bee-keepers, have signified their intention of attending. I shall be glad if you can arrange to be present, and also influence the attendance of any one interested in bee-keeping, as it is most important that the best possible support be given in order to successfully carry out the object in view.

Mr. W. G. Preece, bee expert and medallist, and formerly secretary of the Shropshire B.K.A., has kindly consented to give a short address on the advantages of such an association, and will also exhibit a number of lantern slides, &c.—Yours faithfully,

R. T. DUNCAN.

Barry,
June 11, 1902.

YORKSHIRE AGRICULTURAL SOCIETY.

We beg to remind intending exhibitors that the general entry for the above society's show at Leeds closes on Saturday next, the 21st inst. (Entry at double fees will be received up to Saturday, June 28.)

THE "ROYAL COUNTIES" SHOW AT READING.

That unregulable element, the weather, sadly marred the success—at least from the spectatorial point of view—of the first of the honey shows of the present season, which this year was held at Reading, from June 10 to 13 inclusive. But while the honey exhibited was good both in quality and quantity, and a brave display, both of the produce of the hive and of appliances, rewarded the exertions of the indefatigable hon. sec. of the Berks B.K.A. (with whom rested the management of the agricultural section of the show), and gratified those who were fortunate enough to pay it a visit before Jupiter Pluvius turned the show ground into a veritable swamp, there was, as might be expected, considerinig the backwardness of the season and the earliness of the show, very little of the current year's honey crop in evidence. The Bee tent of the Berks B.K.A. was erected, and demonstrations and lectures were given therein at intervals, when atmospheric conditions were favourable, by Mr. H. Edwards, of Shrubs Hill, Sunningdale.

On Wednesday, 11th inst., King Lewanika visited the show, and evinced much delight on witnessing the manipulations in the tent: and on the following day the Prince and Princess of Wales graced the fixture with their presence, and were to have witnessed a demonstration. Owing, however, to rain and the sodden nature of the ground, the projected tour of the exhibits had to be abandoned; but Messrs. Felix B. Parfit, J.P., D. W. Bishop-Ackerman, and H. Edwards, representing the Council of the Berks B.K.A., had the honour of being introduced to the Royal box, where, on behalf of the association, Mrs. G. W. Palmer (wife of one of the vice-presidents), made a presentation to the Princess of a basket of Berkshire honey, which was graciously accepted; and Mr. Edwards introduced to the notice of their Royal Highnesses a royal princess (virgin queen)—one of several which had hatched out in a nucleus on the show ground a few hours earlier. Mr. W. Broughton Carr officiated as judge, and made the following awards:—

OPEN CLASSES.

Collection of Hives and Appliances.—1st, E. H. Taylor, Welwyn; 2nd, R. H. Coltman, Burton-on-Trent; 3rd, T. A. Flood, Reading.

Observatory Hive with Queen and Bees.—1st, A. E. C. Mumford, Redhill.

Complete Frame-hive.—1st, R. H. Coltman; 2nd, E. H. Taylor; 3rd, T. A. Flood.

Complete Inexpensive Frame-hive for Cottager's Use.—1st, R. H. Coltman; 2nd, A. E. C. Mumford; 3rd, R. H. Coltman; h.c., E. H. Taylor.

Twelve 1-*lb. Sections of* 1901 *or any previous year.*—1st, W. Woodley, Beedon, Newbury; 2nd, J. Sopp, Crowmarsh; 3rd, Surg.-Gen. Woolfryes, Kintbury.

Six 1-*lb. Sections of* 1902.—1st, W. Woodley; 2nd, A. Hamer, Llandilo, S. Wales; 3rd, D. W. Bishop-Ackerman, Reading.

Twelve 1-*lb. Jars Extracted Honey.*—1st, H. W. Seymour, Henley-on-Thames; 2nd, A. G. Preen, Nessclife.

Twelve 1-*lb. Jars Liquid Honey, Gathered prior to* 1902.—1st, H. W. Seymour; 2nd, W. Woodley; 3rd, A. G. Preen; 4th, Rev. E. R. Iremonger, Clatford; v.h.c., R. Dutton, Terling; h.c., Rev. W. H. Edwards, Pangbourne.

Twelve 1-*lb. Jars Granulated Honey.*—1st, H. W. Seymour; 2nd, R. Rowell, Winchfield; 3rd, W. Woodley; v.h.c., R. Allen, Bicester.

Honey Trophy (100 lb. limit).—1st (and silver medal of B.B.K.A.) W. Woodley ; 2nd, D. W. Bishop-Ackerman.

Honey Trophy.—(50 lb. limit).—1st (and bronze medal of B.B.K.A.) H. W. Seymour ; 2nd, D. W. Bishop-Ackerman.

Beeswax (not less than 3 lb.)—1st, H. W Seymour ; 2nd, Jno. Berry, Llanrwst, N. Wales) ; 3rd, E. C. R. White, Newton Toney ; v.h.c., R. Dutton ; h.c., D. W. Bishop-Ackerman.

Useful Invention Connected with Bee-Keeping.—1st, H. Edwards, Sunningdale, (swarm-catcher) ; 2nd, Messrs. Sheppard and Howard (section-rack with woven wire dividers) ; 3rd, R. Allen (emergency swarm box and travelling crate combined).

Collection of Honey and Wax in Applied Form.—1st, H. W. Seymour.

Mead (Half gallon).—1st, H. W. Seymour ; 2nd, A. Hamer.

Honey Vinegar (Half gallon).—1st, H. W. Seymour.

Educational Exhibit Connected with Bee Culture.—1st, Dr. Percy Sharp, Brant Broughton, Lincs. (lantern slides) ; 2nd, H. W. Seymour (honey in applied form).

LOCAL CLASSES.

Six 1-*lb. Sections of any Year.*—1st, W. Woodley ; 2nd, J. Sopp ; 3rd, A. Head, Winkfield.

Six 1-*lb. Sections of* 1902.—No award.

Twelve 1-*lb. Jars Extracted Honey of any Year.*—1st, H. W. Seymour ; 2nd, J. Sopp and W. Woodley (equal) ; 3rd, S. Temblett ; Andover, and C. J. Johnson, Caversham (equal) ; v.h.c., W. R. Howell, Wallingford.

Six 1-*lb. Jars Honey of any Year.*—(1st not awarded) ; 2nd, A. Head.

Six 1-*lb. Jars Extracted Honey of* 1902.—No awards.

Comb-Honey Design.—(1st not awarded) ; 2nd, H. W. Seymour and J. Sopp (equal).

Beeswax.—1st, H. W. Seymour ; 2nd, W. Woodley ; 3rd, G. W. Davies, Wallingford, and Rev. W. H. Edwards (equal) ; c., Rev. E. R. Iremonger.

SPECIAL CLASSES.

Six 1-*lb. Sections of* 1902.—(1st and 2nd not awarded) ; 3rd, D. W. Bishop-Ackerman.

Six 1-*lb. Jars Extracted Honey of* 1902.—No award.—(*Communicated.*)

On Friday, the last day of the show, an examination of candidates for the Third Class Certificate of the B.B.K.A was held on the show ground under the most adverse conditions possible to conceive. Heavy rain fell during the whole time, and but for the hearty and helpful assistance of the Hon. Secretary, Mr. Bishop-Ackerman, Mr. Edwards, the expert, and some of the candidates, the practical portion of the examination would have been impossible, and as some of the candidates had travelled long distances to attend, grievous disappointment would have resulted. However, a canvas awning was run up, and rough and ready protection from the downpour extemporised, and we were thus enabled to get through the work.

We refer to this matter here in simple justice to the gentlemen named, without whose cordial co-operation our own time—as examiner—and that of the candidates would have been wasted.—W. B. C.

NORTHUMBERLAND AND DURHAM B.K.A.

Mr. James Waddell, Wooler, Secretary of the Northumberland and Durham Bee-keepers' Association has been appointed as an expert, to make a tour amongst the bee-keeping community with a view to give advice and assistance to those requiring it. Mr. Waddell will be supported financially from the County Council. Arrangements are being made for the next show to be held in Newcastle, and the Society has been fortunate in securing the services of Earl Grey as President.—(*Communicated*).

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4799.] *A Trying Season.*—The poet writes of glorious June, sunny, flowery, leafy June, of "The golden smile of June, with bloom and sun in every place, and all the world in tune," but the present month, so far as it has gone (16th), instead of smiles has worn a constant frown. In fact, it has been as sunless and wet as November, and cold as March, with scarcely a break in the cloudy sky. The weather has been, indeed, a time of trial and anxiety to the bee-keeper and disastrous for the poor bees. We hear of starved stocks, of drones (mature and immature) being cast out of the hives in every direction. New swarms which ventured to start colonising in the three or four warm days at the end of May, some of them utterly ruined ; those not fed being found dead in heaps on the floor-board ; while those which have been fed every day, have made little progress beyond a little comb-building. The barometer has misled us this month, for it has rained more or less nearly every day (or night), and whether pointing to "Fair," "Change," or "Rain," the conditions outside have been the same. Yet with every rise in

the barometer our hopes have risen also; but the fervent wish for a few days of "bee-weather"—when the bees could get to work and save labour and expense of feeding—has been unrealised. So far as my memory serves, the present season is worse in my own district than that of '88, when we had a few days in which the bees worked hard and stored a little honey.

Bee-keepers who have supered and have not troubled to feed their stocks will, I fear, (if climatic conditions are general) cripple the future usefulness of their colonies, even if we get better weather later on; and the general opinion of the weather-wise is that we shall get no settled weather till after the 21st inst.

Natural Swarming.—The foregoing note will make it plain to any one that natural swarms have been few in number so far, and the forecast points to continued scarcity. The greater part of the drone-brood has been destroyed by the bees in trying to save the colony; consequently, one great incentive to swarming has been removed; then, again, in many cases the hives are empty and bare of honey, breeding has been curtailed if not stopped altogether, and these empty cells will be the first to be filled with honey when surplus is brought in. This must, of course, reduce the breeding-space in the near future, and further remove that congested condition of hives necessary to start the so-called "swarming fever."

Artificial Swarms.—These I do not make or recommend, nor would I advise any one to make them, except as nuclei, with a frame or two from other hives and a few bees, to gradually build up into stocks for another season. Artificial swarms do not start off with that verve and *vim* that animate the natural swarm; they are more in the position of transported forced labour, lacking the buoyant hope and "go" of the enterprising hard-working colony of emigrants, and, though they may, and do, manage to establish themselves, the colony will in the following year be barely equal to a good natural swarm of that period, and may yield results of surplus sometimes not equal to that of a good natural swarm of the current season.

The Present Need for Feeding.—Yes, feed regularly during the present bad bee-weather if the bees are to live and prosper. Thin syrup, given in shallow-pans in the open, is the least troublesome. A wisp of straw to prevent the bees drowning in the syrup, or half a pint of syrup to each stock every night will carry on the colony till better times.

Foul Brood.—It appears from the numerous letters in your query and reply columns that disease is still rampant in the country. "Robbing" of diseased stocks is now generally considered to be the most fruitful source of spreading foul brood, and results seem to prove that it is so; but this insidious foe to bee-keeping may be scattered in other forms and through other sources. What of comb-foundation, for instance? Is every parcel of wax thoroughly treated before being made up into comb-foundation to insure the destruction of every germ and spore? If bee-keepers had to pay double for foundation *warranted* free from germs of disease, it would be cheap at the price compared to foundation that *may* contain the germs of disease. I think that every maker should take steps to sterilise wax before making it into foundation. Again, what systems are our experts following for its eradication? Is each one a law unto himself, or is there any recognised system? Now is the time to discuss this matter, when the spring tours are closing. Let us have "associated effort" along this line for the benefit of our craft and those poor handicapped ones who are in the toils of foul brood.—W. Woodley, *Beedon, Newbury.*

PATENT HIVES.

[4800.] Referring to Mr. Gray's letter in the Bee Journal of May 29 (page 213), a question is asked you concerning the state of mind of your contributor "D. M. M." respecting my hive when he wrote on "Current Topics," in B.J. of May 13 (page 192). So far as I have seen, no answer has been given. I think "D. M. M." was the right party to answer the rather uncomplimentary question, but I suppose he has more important duties to attend to. Having, however, had the pleasure of a visit from him recently, I can vouch for his being a gentleman whose statements can be "taken seriously." The "statements" referred to were mostly taken up with giving my estimate of my "offspring," and what I claim for it. His opinion is "seriously" and very guardedly given when he admits that my hive is a "novelty," and says that some points of it may come in for commendation. However, I am quite satisfied with that from one who like yourself prefers to "let well alone." When "D. M. M." saw my hive, it was not completed. This has now been done, and a patent applied for, so that the public will soon have an opportunity of judging of its merits, and it will get a chance to "stand on its own legs."

Mr. Gray seems to have jumped to the conclusion that he has forstalled me. This may be so, but he must know that there are different ways of doing the same thing.

This much I am certain of, my hive is original and different in all its parts and method of working from any hive yet invented so far as I know. It is generous of Mr. Gray to offer to "freely give" what he has "freely received" (he does not say from whom) to the readers of the B.J., and I, for one, hope he will not keep us long in suspense.—Alexander Reid, *Urray, N.B.*

P.S.—After D. M. M.'s comments on my hive appeared, I have had a copy of another bee journal sent me (I thought they were all defunct except yours). It is claimed to be "a journal devoted to up-to-date bee-keeping.'

I must confess I found it a little *too far up* for me. I was entertained with it certainly, but I confess my inability to quite understand it, some of it being beyond my comprehension. However, I mean to become a subscriber. I like something with a bit of "go" in it and, perhaps, its Editor will enlighten me on a few points, that is to say, if some of the startling assertions he makes are "meant to be taken seriously." Talk of patent hives, they are too numerous to mention, but does not that very fact show that many want something better than the now old bar-frame hive? Call it up-to-date if you like. Let the old one go into the smelting pot like, as Dr. Rainny has given the higher critics liberty to do with the old books of the Bible, and it will come out purified, perfected, and complete.—A. R.

THE SEASON IN KENT.

AN ENCOURAGING REPORT.

[4801.] The incidents of bee-keeping are varied and numerous, and as a counterbalance to many depressing ones which this cheerless season has produced, it will be interesting to some of your readers to hear of one, in which I bore a part on Wednesday, the 11th inst. In fulfilment of a promise I visited on that day the County Industrial School at Ashford, Kent. In a pleasant introductory chat with the superintendent, I found that he had two hives of bees in straw skeps which he had placed upon the frames of two hives last autumn. One of these was in strong condition, the other he believed so be weak. On the 7th of the month he had driven the bees in the strong hive and caught and put the queen into the bottom hive and duly placed a queen-excluder in position and replaced the skep upon it. While this was being related the report came that the bees were swarming, and conversation was promptly abandoned, giving place to action. The swarm was not long in settling, pending which we examined the combined hives. The skep was removed and inverted, and was found to contain quite a large number of bees, sealed brood in all the combs from top to bottom, and several queen cells. This was set aside and attention directed to the frames in the hive, on which the skep had rested. Upon taking them out one by one every frame was found completely occupied from top to bottom with sealed brood, there being several queen cells. The question then arose what should be done? Here was an opportunity, which I regarded as almost unique, of making three good colonies out of one, and it was so decided; the swarm, weighing upwards of 6 lb., was hived in a new "W. B. C." hive; the combs and bees, which had furnished the swarm, were lifted out and put into a similar hive, and the skep was placed over the hive referred to as the weak one, which we found possessed a drone-laying queen, and was practically empty. Of course, the latter queen was caught and destroyed. The pleasure of the owner was unbounded, and as for myself, I found it, well, exhilarating. A reasonable computation of the number of bees in the swarm and in the combined hives would be 50,000, and those to shortly hatch out 60,000, so that *when* the warm weather comes the fortunate owner may look with some confidence to a fair harvest from his hives. I trust it may be in my power in due time to report progress. I can only describe the hive as magnificent.—J. GARRATT, *Meopham, Kent.*

FOUL BROOD TROUBLES IN WALES

BUYING DISEASED STOCKS.

[4802.] Allow me, Mr. Editor, to express my sympathy with the "bee-keeper in Wales," referred to in your editorial of the 5th inst. (page 221). I, too, am another bee-keeper in Wales, and badly hit by foul brood. Of fifty stocks put up for winter only two were found in the spring unaffected by the scourge. It had made its appearance in some of the hives a year ago, and after then treating the affected cases in a drastic manner and, as I thought, cured them, the discovery made this spring that the disease had spread throughout the apiary was disconcerting in the extreme. The number of my stocks is now reduced by deaths and uniting to thirteen, and of those not more than three are of effective, surplus-storing strength. All old combs are destroyed, and hives cleaned, and I am hopeful that with care the disease will be kept under.

As to the cause of the outbreak, I can only surmise that it was due to the presence of germs of the disease in some stocks that I bought three years ago. I have kept bees for about twenty years, and, previous to last summer, had had no acquaintance with foul brood. My present experience has convinced me of the urgent need of a British Foul Brood Act, for, so long as half or more of our counties are without bee associations, the means for keeping foul brood under control are practically non-existent. Even were every county provided with its association, the non-inclusion of a large proportion of bee-keepers would go far to nullify the efforts of the associations in their attempts at repression. It seems to me that nothing short of compulsory powers will avail.

As there is nothing to be gained by concealment, I append my name and address.—JOHN MORGAN, *Upper Boat, Pontypridd, Glam.*

INSURANCE FOR BEE-KEEPERS.

[4803.] Correspondence upon this subject having revived, I would like to take the opportunity to enter a strong protest against the additional charge imposed upon bee-

keepers who are not members of the British Bee-keepers' Association. The sum charged extra—*i.e.*, 6d.—is, of course, small and hardly worth quarrelling over, but the principle of the thing is objectionable, more especially in view of the large share which unattached bee-keepers have taken in making the insurance scheme possible.

If I mistake not, the subject was originally brought forward by a non-member, and past copies of our JOURNAL will further bear witness that non-members took a lively and useful interest in the matter. Later, we read in the JOURNAL that the scheme proposed could only be carried out if sufficient support were obtained from bee-keepers generally and (page 41) ". . . . a sufficient amount of support has now been promised, ... it is not a little curious to note that the *great majority* of applications received . . . . have come from readers of the B.B.J. who are not members of any bee-keepers' association at all."

If this means anything, it would appear that without the support of unattached bee-keepers the insurance scheme would have come to nothing. For this service this body of bee-keepers is to be mulcted in an additional fee! —UNATTACHED, *June* 13.

QUEEN VAGARIES.

[4804.] Would you be so good as to give me your valued opinion concerning the conduct of some bees under the following circumstances :—On Friday, June 6, a hive swarmed. The owner (a lady who has just commenced bee-keeping) asked me to look at them on Sunday, the 8th, fearing something was wrong with the parent stock. I found the swarm had been nicely housed in a new hive, but the old stock was in a dirty old hive with a fixed floor-board; and, moreover, being only about 16½ in. wide, the top bars of standard frames had to be cut down a little in order to go in. I also saw and destroyed several wax-moth grubs—these were what had alarmed the owner. As expense was no object, I advised her to get a new hive, and to transfer the frames and destroy the old hive. There were six or seven sealed queen-cells in the hive. On Sunday, the 15th, the new hive being ready, I went to transfer the bees for her. I lifted the old hive to one side, stood the new one in its place, and then transferred the frames one by one, keeping them in the same order. I spotted the queen, and found that all the queen-cells *except two* had been torn open at the *side* and destroyed. Of the other two, one was open at the apex and empty—presumably the cell from which the queen I had seen had hatched out. The other I cut out; it contained a young queen in quite an early stage of nymph-hood. From these signs I concluded that the bees had decided not to send out a cast. There were no eggs as yet in the hive, but, considering the cold and wet of the week from June 8 to 15, I was not surprised, for even if the queen had been several days hatched she had scarcely had a chance of taking the nuptial flight. So far, therefore, all seemed straightforward and clear; but now comes the—to me—unexpected conduct of the bees. Scarcely ten minutes after the removal was finished, the bees in large numbers began to stream out from the hive, apparently as though they were going to swarm; but, although a good many circled about in the air, a large number—I should say the majority—simply settled on the ground and the surrounding plants — potatoes, in fact — and almost immediately these began returning to the hive or collecting in little clusters about and upon the hive. Almost at the moment that the bees began to come out a light rain came on, which very soon became a sharp shower. This rapidly hurried them in, and also drove us indoors for about threequarters of an hour. On my return it seemed at first as though all the bees had gone in, but I found a cluster of perhaps a pint or so of bees had settled near the top of a wall thickly covered with ivy. These I secured, and threw out upon the alighting board; and sure enough *there was the queen* with them! Now what I should like to know is why they went out. Is it probable that in spite of what seemed like signs to the contrary, they were a "cast," which were baulked of their full intentions by the rain: or might it have been that the queen went off on her nuptial flight and that the rain together, perhaps, with the unusual presence of several people about the hive caused her to alight on the wall close by? Or is there any other probable explanation?—BALLYDAWLY, *London, S.W., June* 16.

[The natural inference is that, as you happened to select the very day when—under normal conditions—the second swarm was due, the first hatched queen was with the "cluster" which you hived, and the rain caused the straggling lots to return to the hive instead of joining the queen, as they would eventually have done but for the rain.—EDS.]

BEES ON THE MARCH IN SOUTH AFRICA.

A COMMANDEERED SWARM.

[4805.] I received a letter this morning from a friend, Sergeant-Major J. Lincoln, 7th Battery, Royal Artillery, dated from Kroonstadt, South Africa, May 6, 1902, in which, after inquiring after my bees here at home, he gives an account of a swarm of bees he met with in South Africa. The extract from the sergeant-major's letter reads as follows:—"Talking of bees, when we were out on trek near Senekal last January we caught a couple of Boers in a Cape cart, and after having this cart in the battery for a couple of days we found there was a genuine swarm of bees under the seat, with quite a lot of honey i-

their combs. I could not understand why there always seemed to be so many bees flying about around the cart as we were going along the road, but while our "wheeler" was doing some slight repairs to the cart he came across the bees under the seat. Of course we had a regular treat of honey on our biscuits. I was sorry afterwards I did not take a snapshot of them in the cart before we disturbed them. It would have been a bit of a curio, wouldn't it?" As we get some accounts of bees in queer situations in B.B.J. I thought the extract might have some interest to readers, as we have had several accounts about the doings of bees from that country in your pages.—R. MEADOWCROFT, *Wokingham, Berks.*

POLLEN-CLOGGED COMBS.

[4806.] I notice in BEE JOURNAL from time to time correspondents complaining of being unable to clean "pollen-clogged combs," and in reply to W. J. Smith you say on page 220 (May 29) "There is no known or easy method of cleaning pollen-clogged combs so as to render them fit for use." If you will send me on a pollen-clogged comb, even of comb in which no brood has been reared, I will clean it, and return to you by next post. I think you will find the comb an agreeable surprise, and as readily taken to by the bees as any others. I have myself had them filled with eggs on both sides in three days. Old combs with hardened, dry pollen are more difficult, but unless the pollen is *hardened pea-meal or flour* they can be cleaned with a little more patience. I have sent you an advertisement, and any bee-keepers wishing a few cleaned should pack securely and note the rail address.

Combs pollen-clogged should have the honey extracted and packed so as not to injure the cells.—D. VALLANCE, *Dunaskin, Lincs.*

[In the general interest of bee-keepers we depart from our rule of keeping correspondence outside the region of "free advertisements" in the above case, and will be glad to forward a pollen-clogged comb—if some reader will send one to this office—to Mr. Vallance for cleaning, and on its return will report for the benefit of readers.—EDS.]

BEES IN MID-SHROPSHIRE.

[4807.] I wish that I could send your readers a more cheerful "note" from these parts. I do not know how our brethren in the south are doing, but in this district of the Midlands things are looking very bad indeed. The weather is about as adverse as it possibly can be. A fortnight ago bees were well up in supers, and looked like doing some good work, but to-day the supers are practically deserted. We have had cold north winds for a week or more, with not the slightest prospect of a change for the better. Several bee-keepers much older than myself declare that they have never experienced anything similar to that they are having now. The bees are right, the bee-keepers are right, the country is right—all we need is some sunshine, and then things will go with a merry hum. May the change soon come and gladden the heart of every bee-man, including myself.—JAMES CLAY, *Wellington, Salop, June* 14.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

L'Apicoltore (Italy).—The lizard must decidedly be reckoned as an enemy of the bee, and commits much havoc in the early rpring before the straw cushions, which are placed between hive and hive at the beginning of winter, are removed.

These form a favourable lurking-place for the lizards, and any tired bee alighting on the cushions on her way back to the hive, falls a victim to the watchful foe. When the straw padding is removed, and when, as spring advances, there is more insect life abroad, these creatures seem to leave the apiaries.

Deutsche Bieninsche (from *American Bee Journal*).—We have combs forty years old that I would not exchange for the same quantity of new foundation.

Elsass-Lothringischer Bienen Zeitung.—Tribute of honey and wax under the Parlavingians.—From Acts of the time of Charlemagne we find that every royal seat was surrounded by a territory belonging especially to it, generally a few villages with large farm holdings; sometimes even considerable towns with a warden and mayor, both of which had to pay a tribute in kind to the palace at regular times of grain, flour, malt, vegetables, eggs, butter, cheese, poultry, meat, fish, lard, also *honey and wax*, and other articles.

In case of the Emperor arriving unexpectedly at the palace, smoked provisions and salted meat, sausages, butter cheese, *honey and wax*, flour, wine, beer, and vinegar, were kept in store.

In the royal district, Asuapium, the tribute consisted of ninety baskets full of old corn, 100 measures of barley, 100 measures of wheat 430 of oats, one measure of beans, twelve of peas, three measures of *honey*, one of butter, ten sides of bacon, 400 fresh hams, and 43 lb. of cheese.

The cattle also came under tribute thus:—Seventy-nine riding horses, twenty-four three-year-old, twelve two-year-old, thirteen one year; four mules, twenty oxen, two asses, thirty cows with their calves, three bulls, 150 large pigs, 100 young pigs, eighty sheep with their lambs, fifteen goats with kids, six he-goats, &c.

Fifty Hives of Bees.—Forty geese, six ducks, 100 fowls, and eight peacocks.

In the monasteries of this period bee-keep-

ing was much in favour. The monastery of Staffelsee had seventeen hives, and amongst other provisions mentioned was a store of honey.

On a farm belonging to the Abbey of Freising we read of two hives of bees. Of two holdings of the Abbey of Lorch, one had to deliver yearly a pig, a pot of honey, a measure of flour, and of oats and two pieces of linen-cloth. The other contributing a pig, a pot of honey, a measure of oats and fifteen eggs.

Queries and Replies.

[2885.] *A Beginner's Troubles.*—I have just commenced bee-keeping, having purchased a stock, and a "W. B. C." hive, &c., from one of the leading firms. The bees reached me on April 26, and I transferred them from travelling box to hive while a strong cold wind was blowing. With a beginner's audacity, I handled them without gloves or gauntlets, and soon found a number of the bees seeking an abiding place up the sleeves of my coat. Consequently, I got four stings in one arm and one in the other, and considered I had got off lightly.

I have been reading your valuable paper for some time now, and have well studied the "Guide Book." Acting on advice from both, I fed my bees from the start, and have the satisfaction now of seeing a strong stock of eager workers. About ten days ago, I decided to examine as to the quantity of brood, &c., but, desiring to escape crippling from swelled arms, took the precaution to tie my coat sleeves, and rubbed my hands and wrists well with "Apifuge," then, with a "case" of "Resa" in my waistcoat pocket, I felt confident and safe. But I had hardly commenced operations when, resisting all the charms or otherwise of the "Apifuge," a bee declared war against me, and stung the back of my hand with a joyous spite which was soon changed into painful fear. I was still confident, however, for had I not "Resa" for my friend, and so, carefully extracted the sting, I rubbed in the "reliable remedy" and continued my examination, with which I was well satisfied, although the shortness of food in the hive showed the soundness of your advice to feed the bees. But, alas, for the remedies, my arm had begun to swell considerably, and in spite of continued and prolonged rubbings with the "New" remedy, the swelling increased until from my finger tips to my elbow I had doubled in size. Since then I have had a certain amount of contempt for "Apifuge" and "Resa," and a good deal of respect for bee-keepers who are silly enough to wear gloves. It would pay me better to buy a pair than to lose two days' business and spend money on preventives and remedies. I must say, however, that while helping a friend I was stung on the neck, and that he almost immediately applied liquid ammonia, which apparently was most efficacious, as I had no more trouble from the sting. In conclusion, allow me to add my testimony to the worth of the BEE JOURNAL, and to ask one question. Last week I bought a swarm which had been hived in a skep for about fourteen days. I decided not to interfere with it further than by taking it off the board and placing on the frames of a "W. B. C." filled with foundation. Have I done right, and how long is it likely to be before the queen descends to the bar frames below?—J. AUSDEN, *Canterbury.*

REPLY.—Before dealing with our correspondent's query on transferring, we may venture a word of advice on the earlier portion of his interesting letter, as it is always a point with us to try and put beginners in the right way where possible. In this way, then, we advise our correspondent to adopt the wise adage, "make haste slowly" in most things connected with bees. "Audacity" is no doubt very useful at times, but in bee-keeping it is seldom so, as bees resent it in their own very *pointed* way, and it rarely succeeds. On the other hand, a quiet gentleness of manner in handling has usually the good result of inducing quietness in the bees, and our friend may take it from us that he will soon be able to discard both "remedies" and "gloves" if he goes the right way about his bee work, for he is evidently made of the right material for a good bee man. With regard to "gloves," however, we advise him to discard them with all speed when he has got on a little way, and in using "remedies" he had best not use them on the top of each other as described above. When dealing with antidotes, any "mixing" of material may possibly nullify the good effects of both. Then with regard to ammonia, we have seen it applied many times without any benefit whatever in cases of bee-stings. Replying to your final query, you have done quite right so far, but the time when the queen will take possession of lower hive depends on the amount of comb available for egg-laying in the skep. Directly the old combs are occupied with honey and brood, the queen will pass below and establish the brood-nest there.

[2886.] *Transferring Bees.*—Will you kindly tell me in your next issue what you would advise under following circumstances?—I am a beginner in bee-keeping and am trying to get a skep of bees to transfer themselves to a frame-hive. The stock is a very strong one, and I placed the skep on frames the second week in April, but owing, I suppose, to cold weather, the bees have not yet taken to frames below, and on examining them yesterday I slightly lifted the skep and found three of the combs were broken from their fastenings and resting on frames. The skep is crammed with bees, I did not take skep right off on seeing what had happened, but in placing it back I must have crushed some of

the comb, as the bees have been busy all day removing dead bees and crushed brood from the hive. I do not know now what would be best to do with them, and can see no reference in any of the journals or books to a similar mishap, so would be very grateful for advice. —J. BIRCH, *Windlesham, Surrey.*

REPLY.—Such mishaps as those related above are so entirely the fault of the operator that it should cause no surprise that they are not provided for when giving directions in text-books. We cannot imagine how the combs of skep broke down unless very roughly handled, the operation in question being one of the simplest bits of bee-work we know of. The same may be said of crushing the comb in replacing the skep, and therefore we advise you to leave the skep where it is, and allow the bees to make the best of matters. If as strong as you suppose, they will take possession of the frame-hive when the queen needs room for egg-laying, and your lack of experience makes us fear to advise any further lifting of the skep. On the other hand, if you can secure the help of one who is accustomed to bee-work, he would, perhaps, be able to straighten matters up without much effort or labour, and put you in the way of going on all right in future.

[2887.] *Pollen-laden Bees in Swarm.*—Can you kindly explain why in a swarm which came off here yesterday a large percentage of the bees composing it were carrying pollen? I have never in my experience seen anything like the amount in a swarm before. They were placed on their old stand on eight frames with 1-in. starters, and given the super from the old hive, and to-day are hard at work, and, to my surprise, are still carrying pollen in quantities. I have always hived my swarms as above, and have never had pollen in the supers, as usually the bees, I notice, take in little for a day or two when hived. An explanation of the above would greatly oblige.—A DUMFRIESSHIRE BEE-KEEPER, *Thornhill, June* 14.

REPLY.—It is nothing uncommon to see a few scores of pollen-laden bees among the thousands which constitute a swarm. Moreover, it only shows that pollen is very abundant in your locality just now, and that the bees in question—on returning home laden with it—have become suddenly filled with the joyous excitement of the swarm's outrush, and joined the emigrating host of bees without stopping to unburden their legs.

[2888.] *Advertising Stocks of Bees for Sale.* —Perhaps it would be of some interest to other of your readers as well as myself if you gave us your opinion as to what right or reason a man has, who sells a stock of bees through your advertisement columns, in not sending the same within a few days. There is a continuous advertisement in your JOURNAL of stocks for sale. I wrote for one and sent money along; in reply he informs me that my order will be filled in rotation. I could understand this if I had written for a swarm; but I was in urgent need of a small stock in order to transfer some frames of brood to it from my overflowing colony, and thus try to prevent swarming. It is now going on for two weeks since I wrote, and in the meantime I could have purchased others, and got them near home, too, by the advertisements in your last issue. I think it is very misleading for any one to offer stocks for sale who is not able to immediately fill his orders. I have sent the advertiser two postcards since, but, having received no reply, I suppose I shall have to wait until he either swarms his hives or forms a stock out of a nucleus. In the meantime my own bees may swarm and frustrate my own object. Truly, a man is on the wrong side of a bargain when he pays his money before getting his goods.—A BEE-KEEPER, *Southport.*

REPLY.—Without overlooking the difficulty of judging rightly before hearing both sides of the case, our correspondent seems to have a real ground for complaint, and, as we have the means of identifying the advertiser in question, we have written the latter, and hope to have some explanation of the delay, pending which we defer expressing an "opinion" as requested.

Echoes from the Hives.

Beedon, Newbury, June 10.—The first week of June, now passed, is no improvement on May—wet, cold, dull days, very much like the June of 1888—no swarms and barely a supply of food being gathered by even strong hives; a few very strong stocks stored a few pounds of honey the previous week from trifolium and other sources, but no increase of stores is observable for the first week in June. I have not supered more than half my apiary—first, because I want some swarms for customers, and, secondly, I have had to feed to keep them growing. I have noticed drone larvæ, partly eaten, being cast out of a few hives; this tells the tale of shortage of supply of food. The rains have greatly increased the forage, if we could only get the weather suitable for its ingathering. I hope our friends who have had early swarms have fed them, unless the weather has been different from ours in West Berks.—W. WOODLEY.

Churchdown, near Cheltenham, June 10.—Never do I remember a more trying spring for the poor bees than that of 1902. With winds generally blowing from a northerly direction and bitterly cold, stocks have not pulled along as they should do. Several of mine are now weak, having brood on only five or six frames each, so I must unite to secure the honey-crop. Spring-feeding has been a heavy item with me this time, for I have had to feed nearly all

my stocks, they were so short of stores; however, they all came through the winter well. The strongest have already been supered, and the bees are working well in most of them, but the weather is so bad one cannot expect much result. We had a few warm days on June 2 to June 5, and I had three swarms, two being successfully hived, the other decamped; no doubt these bees had in mind some distant Klondike, where honey would be plentiful, and thought they would emigrate. I hope they have found a home, or all will be starved to death. Clover is now beginning to bloom; this, with the limes, is our main honey crop, so I hope matters will improve. If we could only get settled weather, we might get a good harvest yet. I notice to-day that the bees are gathering honey-dew from the currant bushes, but I should think the late heavy rains will have washed it most all off.—H. SWIFT.

Chichester, June 13.—I hope by the time you "echo" these few lines we shall be having fine weather, with plenty of of sunshine, otherwise the outlook for a honey yield will be far below the average. We seem to get the two extremes of weather latterly; and this season puts one in mind of 1888, which here in the south (and, if I remember right, in the far-away north, too) was the worst on record. But our cry must be "Hope on, hope ever!" And should Old Sol get the upper hand, who knows but the season of 1902 may be a record for honey? Any way, by keeping the bees in tune by judicious feeding, it may turn out all right in the end. Some of the most backward seasons have been known to end as among the best, and to compensate for the present and for the never-ending rain our motto must be "Feed"; and thus we shall keep stocks in trim for a late harvest. The sparrows are a great nuisance this season in catching and eating the bees alive.—J. D.

NOVELTIES FOR 1902.

FANCY STAINED WOODS FOR BEE-KEEPERS' USE.

Messrs. Abbott Bros., Southall, write as follows:—"We beg to forward you samples of new fancy stained woods. These are, perhaps, the greatest novelty seen for many years, and bee-keepers would, no doubt, like to know about them as being capital for making show-cases, show-stands for honey, and, indeed, all other fancy goods in connection with the trade." After inspecting the samples, we can certainly say it is a surprise to see what beautiful effects are got by the wood in question being stained—right through the whole log—in all colours. The various colours bring out the "graining" or markings of the wood in so many tints as to produce a very pretty effect. It remains for enterprising bee-keepers to see how best the new idea may be utilised, and if samples can be had for a small sum, many would, no doubt, apply for them. They are well worth seeing.

Bee Shows to Come.

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A. Thirteen classes, with liberal money prizes and silver medals. **Entries closed.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, Hon. Sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. Schedules from John Maughan, secretary, Blake-street, York. **Entries close June 28.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22, Leam-street, Leamington. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fête in "The Quarry." Bees, Honey, Hives, and Appliances. Eleven Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules ready shortly, from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

VENTA (Winchester).—*Soluble Phenyl.*—1. This can be obtained from Morris, Little, & Co., chemists, Doncaster. It is not "the same as Calvert's No. 2 Medical Carbolic Acid." 2. *Formalin* is analogous to formic acid, which has been mentioned as useful in curing foul brood for many years past, but, like all other antiseptics, it has little or no effect on the *spores* of the disease.

J. C. (Cumberland).—*Artificial Base for Comb-Foundation.*—For the information of yourself and of any other well-meaning bee-keeper who may conceive the idea of substituting an artificial base for comb-foundation, we may inform them that wood, cardboard, muslin, and similar materials have been already tried in order to gain the desirable advantages you have in view, but so far only failure has resulted. It is only fair to tell you this, as it may save your time and expense in experimenting. Try it by all means, if you wish, but we have seen so many failures that our advice is "don't."

L. COLLINGS (Leyland) and GEO. WARD (Chester-le-Street). — *Insect Nomenclature.* —The insects sent by both our correspondents are wild bees of the Andrena species. They are commonly called sand-bees from their habit of nesting in banks of sand or in sandy places.

F. W. HODGSON (Harborne),—Insect sent is a wild bee—*Osmia cœrulescens.* It generally nests in old posts F. W. L. S.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

O AND M (Durham).—Comb is decidedly affected with foul brood.

CARDIGANSHIRE.—Foul brood is developing in comb without any doubt. It does not require bees to be kept in your immediate neighbourhood to account for the outbreak, seeing that bees foraging and perhaps robbing infected hives cover a considerable radius. It is not a bad case, however, and may be kept under by using preventives.

E. GRIFFEN (Upton-on-Severn).—Comb contains chilled brood only; no disease.

A. A. (Saltley, Birmingham).—*Bees Fanning at Hive Entrance.*—The "fanning" at hive entrance mentioned on page 147 of "Guide Book" as one of the indications of foul brood refers to times and seasons when there is no need for "fanning" by the bees to cause a circulation of fresh air when the hive is overheated in warm weather. In other words, the bees "fan" when foul brood is present in order to rid the hive of the bad odour; but in "fanning" a healthy stock is one of the sure signs of prosperity within.

G. D. J. (Carnarvon).—*Expert Help.*—We are very pleased to hear of the promised help being secured, and have no doubt it will be appreciated.

E. A. R. (Saffron Walden).—*Tin Receptacles for Honey.*—We rather think your customer is somewhat of an alarmist with regard to the poisonous effects of tinned goods as food. It is well known that the acid in honey acts upon zinc, and also upon galvanised iron, to the detriment of the honey, but tin prevents this mischief, and it is only when tin of very poor quality is used for honey packages that any mischief arises.

*** *In view of the "Coronation holidays" next week, we will be glad to have all "copy" intended for next issue sent in as early as possible.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 12, Hanover-square, on Thursday, June 19, Mr. T. I. Weston occupying the chair. There were also present Colonel Walker, Dr. T. S. Elliot, Messrs. W. Broughton Carr, H. G. Morris, W. F. Reid, T. H. E. Watts-Silvester, F. B. White, and the Secretary. Apologies for enforced absence were read from Miss Gayton, Hon. and Rev. Henry Bligh, Mr. W. H. Harris, Mr. G. H. Morrell, M.P., Mr. Ernest Walker, and Mr. C. N. White.

The minutes of the previous meeting were read and confirmed.

The following members were elected, viz.: Sharman Forrester, Tombland, Norwich (life member); J. E. Jackson, Pinder Green, Lethley, Leeds; Wm. T. Lewis, Maplewood, Llandaff; Geo. Watson, Simla Lodge, Clonskerf, Dublin; Dr. Sidney Wood, Bottisham, Cambs.

The Report of the Finance Committee, giving particulars of receipts and expenditure to date, was presented and approved.

In accordance with the recommendations of the examiners, it was resolved to award expert certificates to the following: Lionel L. Jacobs, 1st class; H. D. Davidson and A. E. C. Lumford, third class.

Nominations were made of examiners to officiate at Carlisle and Boston, and of judges in the honey department at the forthcoming Dairy Show. The Secretary reported that the Baroness Burdett-Coutts (President) had kindly promised to contribute £10 towards the prize fund, and an additional donation of £10 towards the Challenge Cup to be offered at the Dairy Show in commemoration of the Coronation. It is hoped by further subscriptions the Society will be in a position to offer a cup worthy of the great event.

A number of letters upon various subjects were read to and dealt with by the Council.

A Report by the Secretary in regard to the insurance scheme, together with correspondence relating to a number of difficulties in the working of the scheme, were read and discussed. The Chairman was authorised to consult a solicitor with reference to some of the points raised, and, if necessary, to arrange for counsel's opinion, the issue of receipts to be suspended pending the results of the legal consultation.

The next ordinary meeting of the Council will be held on Thursday, July 17.

GLAMORGANSHIRE B.K.A.

RESUSCITATING THE B.K. ASSOCIATION.

A public meeting was held at the Grand Hotel, Cardiff, on the 20th inst., to consider the advisability of resuscitating the Glamorganshire B.K.A. The attendance was good and representative. Major-General Lee, R.E., J.P., occupied the chair. Among those present were: O. H. Jones, Esq., Dr. De Vere Hunt, Vice-President, Cardiff and County Horticultural Society; F. W. Long, Esq., B.A., County Agricultural Lecturer; Mr. Julian, Secretary Gardener's Society; Freeman Gravil, Esq., W. T. Lewis, Esq., and W. J. Randall, Esq.

The Chairman, having touched upon the desirability of a county association on account of the manifold advantages it afforded, Mr. R. T. Duncan read several sympathetic letters—one of which from the secretary of the Horticultural Society intimated that society's willingness to provide at its next show in July both a tent for honey exhibits and two guineas towards prizes.

Mr. Duncan then formally moved that the Glamorganshire B.K.A. be resuscitated. Mr. W. G. Preece, who seconded, replied to the chairman's question by asserting that in his opinion bee-keeping, carried on by efficient persons on scientific principles could be made a great success in their county. Mr. Jones, Dr. Hunt, and Mr. Long supported the resolution, which was carried *nem. con.*

The rules of the old Association were unanimously adopted *en bloc.* Life members subscribe £5; members 5s., artisans 2s. 6d., and agricultural labourers 1s. each per annum.

The Rt. Hon. Lord Windsor was elected President.

The following Vice-Presidents were chosen: The Earl of Jersey, P.C., Lord Dunraven, Lord Aberdare, Colonel Wyndham Quinn, M.P., Admiral Lyons, Major-General Lee, Sir W. T. Lewis, Sir Thomas Morel, Colonel Fisher, Colonel Turberville, Major Bell, D. T. Alexander, Esq., John Cory, Esq., Godfrey L. Clarke, Esq., Clifford Cory, Esq., E. M. Corbett, Esq., O. H. Jones, Esq., Gordon Lennox, Esq., W. T. Lewis, Esq.

A general committee was appointed together with an acting committee composed as follows:—Messrs. J. Boyes, R. T. Duncan, Freeman Gravil, J. Morgan, W. G. Preece, Robert Thomas, with Messrs. W. H. Lewis, Treasurer; B. Davies, "Ardwyn," Radyr, near Cardiff, and William Richards, Hon. Secretary.

Mr. W. G. Preece, expert and medallist, gave a short but admirable address on "Hive Management," illustrating the same by charts and lantern-slides.

An enthusiastic meeting was concluded with the customary vote of thanks.

It is very greatly wished that all bee-keepers in the county will attach themselves to the Association without delay, for obviously enough the greater the number of members the greater will be the advantages to be derived.—WM. RICHARDS, Hon. Secretary, *Gabalfa, Cardiff, June* 22.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of May, 1902, was £3,622.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4808.] *With Brains, Sir!*—"Pray, Mr. Opie, with what do you mix your colours?" asked a dilettante student of the great painter. "With brains, sir!" was the gruff but true reply. One feels on placing himself in the position of an hon. county secretary or hard-wrought expert, that a little more of this important commodity applied to bee-keeping would be a consummation devoutly to be wished. Perhaps it is not so much the actual lack of brains as the utter want of treating the matter from a common-sense standpoint that proves so aggravating a thorn in the flesh to these hard-wrought officials. A certain date has arrived, and your dilettante keeper of bees demands an examination of his stocks, irrespective of weather or any other hindrance to successful manipulation of hives. In past seasons they were examined by a given date, why not now? Again, the too keen novice sees it advised that a certain operation should be performed by a given time, and rushes off with a low temperature to open his hives, perhaps to spread the brood, with the inevitable result that large quantities are chilled, and the progress of the stock effectually checked for some time. He has at all times an "itching palm" for examination and inspection of the progress his bees are making. Like the plant-grower who persistently raises his plants to see how the roots are progressing, he checks all advancement. With all early manipulations especially, due regard should be given to guiding our actions by the dictates of common sense. Indeed, all beginners should be strongly advised to do as little internal investigation as possible when from outside observation it is seen that the colony shows distinct evidence of prosperity, and all manipulations should be mixed *with brains.*

Hiving Swarms.—A lady queries me as to the phrase "as early as possible" in an article I wrote lately, and suggests that there might be a danger of the bees deserting if dealt with at mid-day. If a swarm comes off early in the day during the continuance of a full honey flow there is an obvious advantage in dealing with it as expeditiously as possible, so that there may be little interruption of work. If the swarmed lot is removed at once, and the new body-box set in its place, containing the removed frames and those added with full sheets of foundation, the swarm may be shaken down in front immediately they cluster, and allowed to run in with little danger of any accident resulting. If the queen is killed, or caught and caged at once, of course it is impossible for the swarm to take wing and decamp, as the bond of union which might have tempted them to seek a new home has been removed. In any case, the swarm, if dealt with immediately after leaving its old home, is what I may call more amenable to discipline than if handled some time after. If, however, the weather is excessively hot with a bright sun beating down from an unclouded sky, it is undoubtedly safest and best for many bee-keepers to leave the swarm in the hiving skep, as near the original hive as possible, and do the "running in" during the cooler part of the day, when there is little likelihood of any desire for bees to play truant. Indeed, I would be inclined to advise that this should be done whenever there is any doubt in the mind of a bee-keeper of a danger of bees decamping during the running in process. All the difference would be the loss of a few hours of comb building or honey gathering, important, no doubt, but sinking into insignificance when placed against even the probable loss of a good swarm.

Paucity of Hives.—In journeying any distance by train, or touring by bicycle, one must strike the observant bee-keeper how very few hives are to be seen along the route. Here and there in certain corners a few may be seen in contiguous gardens, but then long stretches of country are passed without the least signs of a single hive. Certain districts where some enthusiastic admirer of the cult acts as a centre to generate and disseminate the bee-fever, show a considerable proportion of smart, neat, and up-to-date hives. Or perhaps, owing to certain uncommon facilities for the disposal of surplus, bee-keeping proves a special success and flourishes. Where hives are common, one feature is very noticeable. The successful bee-man may be picked out at a glance from his unsuccessful nighbour. Everything about the former's garden looks bright and tight, neat, smart, and tidy, whereas in the latter case hives are all sizes and-sevens, and tilted at all slopes, while the surroundings are anything but an adornment.

The Coronation.—The present issue falls on Coronation Day, when almost countless numbers in every city, town, village, and hamlet are assembled from all parts of the world to do homage and reverence to the great Sovereign whom we delight to honour. The

multitude of swarms we as a nation have sent out to every quarter of the globe acknowledge fealty to the same single bond, so that we really form one colony—the greatest and mightiest of the earth. And thus we will remain as long as we continue one in heart and soul, with the blood-link close binding us. From every one of the bees of this busy human hive, from Poles to Equator, there rises to-day one cry and prayer—"GOD SAVE OUR KING?"—D. M. M., *Banff.*

TACKLING THE BEES.

AN AMATEUR'S EXPERIENCE.

[4809.] I must premise my story by admitting that I was dreadfully afraid of bees. If one buzzed near me I ran; if one pitched on me, I knocked it off. Of course, I knew that to do this was the surest way to get stung, but I could not help it. Last September my brother started bee-keeping with three hives, bought through a well-known expert. These hives he planted outside our front-room window. I shut the window down, as you may be sure, and, being on the safe side, watched him handle the frames. Very soon I began to get interested, and on seeing the bees crawl all over his face and in and out his ears, I came to the conclusion that they were not the fearful creatures I had imagined. He held frames with bees on them that I might observe everything through the window as he talked about them; but as I could not see or hear satisfactorily through the glass, curiosity tempted me outside, not without many a quiver and a perfect readiness to bolt off if the need arose. I looked inside the open hive, and the wonders it contained soon interested me so greatly that I grew quite at home—so to speak—with the bees. Seeing all this, my sister-in-law dared me to remove a frame from a hive and put it back in its place (she was on the safe side of the window, you know). Now when a woman says "dare," a man generally must "do," and so I "did"; but I was very glad when the frame was safe back again in the hive, and could hardly realise that I had not been stung. Thus ended my first bee-experience.

The other day my brother went away for a short holiday. He was in treaty for three more hives of bees at the time when he left, and he said to me, "If the hives come just plant them down, open the doors, and leave them until I return." In due course the hives arrived after a journey of over 100 miles. I noticed that they smelled beautifully of honey. I planted them down carefully, and opened the doors continuously, and so left them. I next took the opportunity of speaking to Mr. Jenkins, a well-known bee-keeper here, who has been godfather to many bee-keepers in the district, about them. With his usual amiability he said, "Let's have a look at them." We went up, and when he opened one of the hives I beheld a sight the interest of which made me forget all my fears. There was before us a fine ten-framed hive with nearly every frame heavy with honey, but every comb of which had got broken loose during the journey and had fallen on top of each other in a heap! while the bees had braced and built them all into one solid mass of beautiful new, white, first season combs all piled on top of each other in the middle of the bare frames! On seeing the state of affairs Mr. Jenkins made an involuntary exclamation which you need not print, adding "Man alive; get me a big dish; now a large knife; hurry up, what ever shall I do?" But he did not wait long; he began by doffing his coat; then after rolling up his sleeves and jamming down his hat, he said: "Now fetch me some tape; bring a lot of it! and a basin and big spoon." Off I hurried to get the necessaries, and, by the time I came back, he had already landed a huge comb with 5 lb. or 6 lb. of the loveliest honey on to the dish I had just brought him. In this one the bottom bar of the frame had given way. The next frame he carefully cut away by severing the brace-comb, then diving his bare hands down among the bees brought out a whole comb and the frame at the same time and held it in its proper upright position with the honey streaming down over his fingers! "Here, come along quick; tie this in, both ends, with that tape! Good! Now the scissors! Cut the ends close. Good again! Now hand me that basin and spoon." Scooping up from the bottom of the hive spoonfuls of honey and drowned bees, he cleared up the hive floor, put back frame No. 1; then the same operation secured frames Nos. 2, 3, and 4. By this time the sticky sides of the hive had made him honey-smeared up past the elbows. "Never mind, old man," said he. "We'll save a lot of them yet. It must have been a wonderfully strong hive, when there are still thousands of bees living yet." And so there were. Luckily, the combs had fallen backwards, and most of the bees must have been round the entrance at the time, endeavouring, no doubt, to get air during the heat of the journey. A moment or two later Mr. Jenkins exclaimed. "There she is! The queen's all right!" This was good news to us, and before long the nine frames were tied into their respective places; and, with a chuckle at having got through a tough job that very few would like to tackle, our bee-friend spread out the basin of mixed honey and bees on to a dish, and put it down in the sun for the bees to carry back to their hive.

A week later he came again, and, after his cutting away the tapes, you would hardly believe the accident had ever happened. I think it will be some time before I get frightened of a bee again. Why, to-day one crawled up my sleeve; it tickled me much while travelling over my skin, but I just held my arm still, and in due time the bee marched

down again. I therefore charitably supposed he—or she—was only engaged in scientific research, and saw no more reason why he—or she—should not have a look up my sleeve than I had in looking over the cells in the hive.—An Amateur Bee-Man, *Glamorgan*, *June* 20.

QUEEN MATING.

[4810.] The following may be of interest to some of your readers as illustrating the period of time which may elapse between the hatching and mating of a young queen. On March 31, on examining one end of a Wells' hive, I found two frames of brood and two sealed queen cells, but no eggs. I was unable to examine again until April 13, when I saw a young queen. I saw this queen fly first on April 15, and on fine days up to May 23, when at 4.15 p.m. she returned with no apparent sign of having mated. It was fine on the afternoon of the 24th but I did not see her on that day. On May 27, I found there were eggs laid regularly in two combs. On June 4, sealing of worker brood had commenced.

According to the above, this queen must have been forty-seven or forty-eight days old when mated, and was flying at intervals for a period of thirty-nine days. It is said that bees take no notice of a virgin queen. I have seen them apparently drive one back on a cloudy day, and often seen them feed one on the alighting board.

I have lost three queens this spring, which makes me think there is something in the observation of your correspondent, "John Berry," *i.e.*, that queens air themselves in the spring.

Farmers tell me here that there will be very little white clover this year; the grass is high and will cover it.—G. F. O'Fflahertie, *Netteswell, Harlow, Essex*, *June* 19.

P.S.—I had three swarms yesterday morning, all the stocks were working well in supers, one had two boxes of shallow-frames on.

REMEDIES FOR BEE-STINGS.

A MEDICAL OPINION.

[4811.] I am much interested in the question of bee-venom and the possibility of applying effectively *any* remedy, whether of known or secret composition, to the locus of a sting. I shall greatly esteem information or experience from bee-keepers on either of these two points: (1) The practical result, beneficial or otherwise, of any remedy; and (2) evidence as to what chemical constituent of the venom is the active irritant or poison? The oft-repeated statement that formic acid is the active principle of the poison I gravely doubt, and believe it to be opposed to the available physiological evidence.—Leslie Phillips, M.D., *Leamington*, *June* 23.

DEALING WITH FOUL BROOD.

[4812.] You will probably recollect that I forwarded to you a piece of comb from a hive of mine which was not doing well and asked you to say if it was infected with "foul brood" and to advise; and that you "wired" me in the affirmative on the 9th inst. I have delayed thanking you till I had removed the bees, burned the mats, &c., and thoroughly disinfected the hive before returning the bees. I carried out generally all the instructions given by Mr. Cowan for application in cases of "foul brood," and with, as I think, the happiest results, as the bees now seem to be doing well. I have five stocks and none of the others have been affected. I now return you my cordial thanks for your assistance and advice, which has been of much service.—Maetal, *Roseneath, N.B.*, *June* 19.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The Rev. Mr. Oldham—whose apiary is shown on next page—is a clergyman who we may assume to have taken the advice to "keep bees" given by a certain Bishop. This being so, we are pleased to see his balance-sheet shows a "profit" side. For the rest, his notes are so full of interest as to need no addition. He says:—

"I am venturing to send a few remarks which must be taken for what they are worth but at the same time are the result of careful thought and work amongst the bees for the last ten years.

"Beginning with one hive, the gift of a friend, I have gradually increased my number of stocks up to twenty, beyond which I do not intend to go, as that number gives one person quite enough work in the busy season.

"I bought my experience rather dearly at first, and well remember taking off my first rack of sections, and the way in which the bees paid me out. I suppose I was rather clumsy, or more probably nervous, and a hole in my veil at the back, of which I was ignorant, proved a rare opportunity for the bees, who were not slow to avail themselves of an entrance.

"The second or third year I became thoroughly interested in the pursuit, and have gone on adding to my stocks up to two years ago, when the maximum was reached.

"As a hobby (and I have several others) it is certainly the most fascinating one I know of, especially when confidence is gained, and one can perform any reasonable manipulation without fear of a sting, even in early spring or autumn regardless of bee veil.

"Much may be done to bring stocks on quickly by feeding, and at the proper time

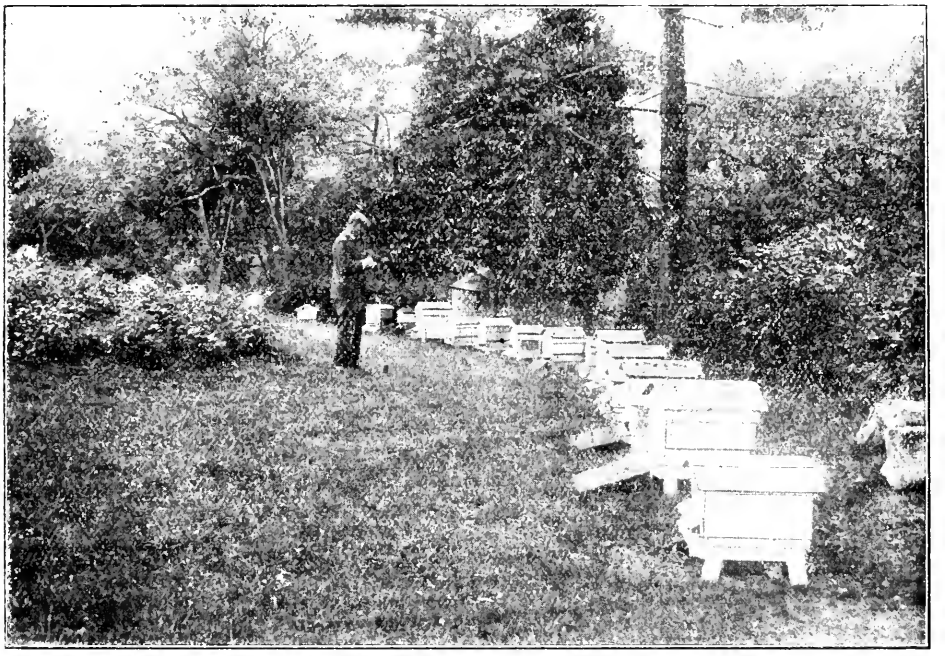
judicious spreading the brood. In fact the object of my writing these remarks is the outcome of an article in the BEE JOURNAL of May 29 by Mr. B. M. Doolittle on 'Spreading Brood in Spring.' I am not able to endorse what he says about reversing the brood, as I have never tried it, but what I find an immense help is to take an outside comb of honey, bruise it and place it in the middle of the brood nest, and repeat the operation at intervals of seven or eight days till the hive is practically full of brood, when a super can be put on, and the bees will as a rule take to it at once. Of course, to do this there must be plenty of stores in the hive, the result of autumn feeding, which is far preferable to spring feeding. It is wonderful how, with careful management, a hive may thus be brought quickly forward. However, as Mr. Doolittle says, 'care and experience' are necessary; and comparatively weak stocks are better left alone. At the present time, May 30, I have three stocks working in supers, and this is by no means an early neighbourhood, my rectory being situated several hundred feet above sea-level.

"Your readers may like to know that I work my apiary for profit as well as pleasure. In fact, I find my bees the most paying part of my farm stock. Last year I kept an accurate account, and found at the end that I had a net profit of £16 10s. on seventeen stocks, spring count. I also had four swarms.

"The great drawback I find is to get a fair price. I average about 6d. a lb. for run honey, and only 7d. for sections. In fact, this year I intend working almost entirely for run honey (shallow-frame supers). Last year my take was over 700 lbs., about half of it in sections.

"This is a good neighbourhood, as it is a great fruit-growing district — plum, cherry, apple, and small fruit trees abounding on all sides, followed by field beans, white clover, and a few lime-trees, with Spanish chestnut and blackberry to finish up with.

"With regard to swarms, if they come off (as they will sometimes) in the middle of the season, my plan is as follows (I think I have seen it recommended by some one in your paper, and it has answered admirably).—



THE REV. E. H. OLDHAM'S APIARY, STANFORD RECTORY, WORCESTER.

"In the evening I run the swarm into a hive fitted up with spare combs, if possible, but failing these, with full sheets of foundation, placing it where the old stock stood, and remove the latter to a new position some way off. The supers are taken off and put on the hive where the swarm is, and in nine cases out of ten will be taken to and finished by the swarm. Only once has the stock from which the swarm came failed to re-queen itself.

"I find Mr. Shepherd's 'Record' hive all that can be desired, both for cheapness and efficiency, and all his appliances compare very favourably with those of other firms.

"In conclusion, I should like to pay a tribute to the Rev. E. Davenport, late expert Worcestershire Bee-keepers' Association, who

has given me valuable advice in former years, and also to Mr. H. Hooper, his successor, who helped me with my extracting, &c., last summer, and whom I found exceedingly obliging and intelligent."

Queries and Replies.

[2889.] *Dividing Stocks for Increase.*—Thanking you for the information you gave me last autumn, I am again asking you for advice concerning a hive I have divided. It was very strong in bees on eleven frames and plenty of brood; so I took frame with queen on and three others loaded with bees, brood, and pollen, and put them into a new "Cowan" hive with four standard frames and wired foundation. This new hive is doing well, but the old stock a week ago had six queen-cells, and I thought soon to have a new queen there. But in looking over frames yesterday week I saw the six queen-cells; I found each queen-cell entirely torn down or destroyed. There is not one left now in the hive. I have been feeding the bees each day with slow feeder. I divided them as directed in Cowan's "Guide Book." Shall be pleased to get your help in BEE JOURNAL, of which I have been a reader for two years, and hope to continue doing so.—E. B., *Selly Oak, June* 22.

REPLY.—The fact of queen cells being found as stated points to there being a queen in the hive. Look again, and see if you cannot find either eggs and brood or a queen in the combs.

[2890.] *Bees Robbing in June.*—I have to-day, under different cover, sent you a small piece of comb taken from one of my four stocks. At the commencement of the season the stocks were all equally strong, but noticing vigorous attempts (chiefly unsuccessful, the bees holding their own) made by the other hives to rob the one under notice and the large amount of fighting I became suspicious and have been closely watching the hive. The combs look healthy to me, and I saw a young worker bee emerge from a cell. A short note in B.B.J. as to whether healthy or not will greatly oblige. If healthy the continued weakness of stock must be due to the queen requiring replacing, as the bees are not too thick on nine frames, whilst the other three are full up on ten frames and in supers, the latter being more than half full and a number of sections completed and sealed. I should, in this case, put a cast into the hive, first removing the queen, which would provide a fresh queen and also bring the stock up to full strength, and would then super at once.—T. A. WILLIAMSON, *Abergavenny, June* 3.

REPLY.—There is no disease in comb sent; the dead brood is "chilled" only. Apparently the queen is at fault. Much obliged for photo of wasps' nest which appears to be a very fine one.

[2891.] *Diagnosing Foul Brood.*—I found enclosed piece of comb in one of my hives, and should be glad to know whether the slightly unpleasant smell is "foul brood" or only dead and decomposed larvæ of drones. The hive in which I found it was otherwise perfectly sweet, and was only examined on account of evident scarcity of bees. I discovered that the queen (a drone-breeder) evidently had been produced at an unfavourable time last year, and was not fertilised. The stock was one of my strongest and most productive in 1901, and there are still about three combs well covered with bees, besides a large number of drones. I also saw (what is very difficult to find elsewhere) a quantity of last year's honey. After taking away the queen I put in a frame of brood from another stock, and shall anxiously watch to see whether the bees will raise a queen. When a stock has been found queenless at the beginning of a season I have never found them able or willing to raise a new queen. I attribute this to the old bees having lost heart and become reconciled to queenlessness, but in the present circumstances I have good hope that the disappearance of their queen being simultaneous with supply of brood the bees will set to work to replace her.—WEST HANTS, *June* 20.

REPLY.—The very ugly piece of comb sent (chiefly old, black drone-comb) had in it but two sealed worker-cells, both of which were so full of the brown, sticky, ropey mass as to convince the most casual observer, after probing, that there must be other and similar cells in the hive from whence sample came. We should give the stock "a short shrift," for it is not only worthless, but the two cells we saw were absolutely rotten with foul brood of old standing.

[2892.] *Dwindling Stocks.*—I am sending, under separate cover, three pieces of comb taken from a weak hive that has steadily gone down, until I am afraid the whole colony will be lost. The piece of comb with the brood in is from another hive, and is part of a comb containing brood which I gave to the weak hive, as I thought the bees had lost their queen, and that they would raise another from the brood given. It appears, however, to have only made things worse. I may say I only started bee-keeping last year, and am, of course, inexperienced. What I want particularly to know, however, is whether there is any disease, and, if there is, what is best to be done in order to protect my other hive, which is doing fairly well, though I find it has been starved a bit.—T. CAMPBELL FUTERS, *Acklington, Northumberland, June* 12.

REPLY.—There is no disease in any one of the three samples sent. No 1 is comb never bred in at all, the cells of which contain

nothing worse than granulated honey. The second piece named has in the cells chilled brood and some pollen, while the third contains pollen only. It would appear that the weak stock has been queenless for some time past, and is, in consequence, entirely worthless at this season, seeing that the bees will be old, and would do no good if re-queened.

[2893.] *Swarms Deserting Hives.*—I hived a swarm of bees on Saturday, the 21st inst., at one o'clock, and after the bees had been hived three hours and a half they all left the hive and made off to a hole in the top of an elm tree about half a mile away. Here they settled and took possession of the tree as their home. The hive I used was well cleaned a few days before the swarm issued. Will you kindly let me know in your next issue of B.B.J. what you think caused the bees to desert the hive?—T. B., *Burford, Oxon, June* 21.

REPLY.—We can only suppose that for some reason or other the bees did not take kindly to the hive in which you housed them. A personal examination might enable us to account for the desertion, as in our personal experience of hiving hundreds of swarms we never had a case of bees flying off after being comfortably hived along with their queen.

[2894.] *Tunisian Bees and Superfluous Queen-cells.*—Last January a friend of mine imported a nuclei of four frames of Tunisian bees, which arrived here in very fair order, and took kindly to their new home. In three months the ten frames were completely filled, and a rack of sections was placed over the brood frames, with the excluder zinc between. Early last month, as the hive seemed to be getting overcrowded with young stock, it was decided to place four frames of young brood in a new hive, and trust to the bees making a queen from a worker. About ten days after the hive was examined, and no less than twenty queen-cells were found, of which eighteen were cut out. In another week an examination was made, but neither young queens nor the queen-cells were to be seen, though on a new frame of foundation another four queen-cells had been started. My friend and myself are both beginners, and at a loss to account for the disappearance of both queens and cells, and therefore ask:—1. Is it not unusual for so many queen-cells to be made at once? 2. Did we do right in cutting out the eighteen cells? 3. We fed the bees to force the production of a queen; was this right?—G. O, *Ootacamund, S. India, June* 3.

REPLY.—1. Tunisian bees are known to raise an inordinate number of queen cells. We have heard of as many as sixty or more cells having been built and occupied with young queens at one time. 2. Yes. 3. With ordinary bees stimulative feeding is useful when queen-rearing, but with the bees referred to the quantity of queens they rear are a positive nuisance. It is probable the young queen intended to head the stock—if one was hatched from the cells you left—met with an accident while out on her mating trip. We assume, of course, that you did not leave abortive cells behind after cutting out the eighteen cells.

[2895.] *Value of Beeswax.*—I shall be glad if you will please enlighten me on the following point under "Queries and Replies," viz., *Beeswax:*—When it costs so much in honey (*i.e.*, the labour of the bees) to produce wax, how is it that wax can be sold so cheaply? If 1 lb. of wax costs, say, at least 6 lb. of honey to produce it, why is 1 lb. of wax not worth at least, say, 6s.?—BEESWAX, *Billiter-square, London, E.C., June* 20.

REPLY.—The question why 1 lb. of beeswax is not worth at least 6s. is to our mind simply one of supply and demand. Nor can the price of beeswax be calculated on the price of British honey. The calculation you have in mind is, we presume, based on what appears in the "Guide Book" (page 14), but that is only intended to show the importance to the bee-keeper of preserving his store-combs for use in successive years, in order to save the bees much time and labour in gathering honey to be used in secreting wax for comb-building. If one bears in mind that from 1 lb. of wax bees can construct 35,000 cells of comb, the statement referred to will be found a perfectly sound one.

[2896.] *Swarming Vagaries.*—On June 11 one of two hives (which I will call A and B) standing 5 ft. apart, swarmed, the bees clustering on a gooseberry bush, about 25 ft. away. The expert of our association came that day and cut out all the queen-cells save one; this done, I returned the bees in the evening, killing the old queen. On the 19th, hive B swarmed, and the bees settled on the same gooseberry bush as did the swarm from A. According to people present at the time, the hive B swarmed a few minutes after A on June 11, as the bees of the latter were settling; but the second swarm mysteriously melted away. I therefore ask: Is it possible that the bees could have left the hive and joined the swarm thinking their old queen was there? The swarm was exceptionally heavy, weighing just under 8 lb. I may add that hive A swarmed again on the 21st, and I again returned the bees to their parent hive, after cutting out all queen-cells. Trusting I have made the details clear to you.—S. G. STEBBINS, *Beddington, June* 22.

REPLY.—It is by no means uncommon for the bees of a hive contiguous to one that is swarming to catch the enthusiasm—so to speak—of the "outrush," and start swarming themselves, and we expect this has occurred on the 11th. But as the queen of B hive did not leave her hive on that date, the bulk of her bees would return—or "melt away," as you

term it. A good many of the bees of B would, however, remain with the swarm from A, and this would account for the extra weight of the latter when hived.

[2897.] *Suspected Store-combs for Feeding Bees.*—I am sending you five cells cut out of some combs I have kept over the winter. These combs were taken from a hive I doubled with another last year, and I got from it four or five boxes of shallow frames filled with honey. The ten standard frames on the top of brood-nest, from which these cells are cut were perfectly filled, weighing nearly 6 lb. each, and I left sufficient in the brood-nest for the winter. On examining these combs previous to putting them in to help some stocks that are short of food, I find ten or twelve cells of the same description as those enclosed. I have cut them all out. 1. Will you kindly give me your opinion whether I shall be running any risk in giving these combs to my bees as food? My hives are now almost boiling over with bees; shallow frames and racks of sections—in some cases doubled—quite full of bees, but no weather to gather anything. Following the advice of one of your correspondents, I tried four of my hives without excluders below sections; the result being I had six racks on the four hives containing eighteen sections each. Out of the 108 sections I found thirty-three had brood in them in various stages. Your correspondent said he could readily forgive his queens if they went up into the sections, as it would show they were very prolific. I cannot so readily forgive mine, for they have spoilt the combs and thrown away a lot of time. I shall be anxious to receive your verdict on the combs, as I want to use them if fit.—A Constant Reader Amateur, *Penryn, Cornwall, June* 23.

Reply.—As each of the cells referred to contains foul brood, we should on no account use the stored combs as bee-food. The honey is quite good for household use, but not for the bees.

[2898.] *More Swarming Vagaries.*—What think you of the breeding propensities of my bees, as detailed in the following notes, taking into consideration our county, and myself as a beginner? On June 11 my colony, which had on top at the time a box of shallow frames and a rack of sections, much to my surprise, commenced to swarm about 2 p.m. As the bees were rushing out, rain, which had threatened all day, began to descend. The swarm, thick in the air at first, soon began to settle on my lettuce plants, on the ground—indeed, on all available space in two or three of the gardens around my own. Hundreds must have perished, for the rain was heavy. About 6 p.m., however, I noticed that the main cluster had formed upon one of the front legs of the hive, and as there was a lull in the downpour I took a coal-shovel and rake and scraped up three fairly good shovelfuls of bees, which I threw upon the flight-board. I think the old queen must have been with this lot. During the evening I rescued many cupfuls of bees, which I found in little bunches on the vegetation about. Now, on the 18th inst., the same hive swarmed again at 1.30 p.m. To me, who had never seen bees swarming before, the quantity that came out seemed prodigious. Happily it kept fine, and they soon clustered on the trunk of my neighbour's apple tree, a few yards away from the hive. The cluster was so big that I thought my skep would hardly hold them, so—as they were only about 1 ft. from the ground—I brought a hive close under them, and soon had them in marching line with the aid of a goose feather. After having placed them in position I went to the old hive, and cut out seven queen-cells, leaving a perfect one for the next sovereign. Now, thought I, that will settle their little antics. Foolish hope; for three days after out came another swarm. This lot went some distance, and settled in a garden perhaps 200 yards away. I soon had them in a skep, which I inverted and covered over with gauze. On weighing them, I found the lot to weigh just 7 lb., which meant a net weight of 4 lb. of bees. When clustered the swarms seemed not more than one-third the size of the first or top swarm. I therefore estimate the latter to be about 10 lb. They completely fill eight frames now, and are carrying in pollen freely. Soon after placing the second swarm in a cool place I opened the parent hive, caught a young queen, which I destroyed, and cut out seven more queen-cells; two or three queens escaped from the cells whilst I was doing this, so I must have overlooked some on the previous Wednesday. In the evening I returned the second swarm to the old hive. Next morning I found two dead queens on the flight-board, and two more the morning after. This morning they carried out another dead queen, and I also found one running about in the garden, but its wings were damaged. The super of shallow frames seems now to be utterly forsaken by the bees, although I have removed one frame. They are carrying in pollen in enormous loads. I can hardly think they have got a young laying queen already. Do you think they are bent on more queen-cells, as the old queen's eggs left last Wednesday will probably serve?—Robt. H. Chadwick.

Reply.—From details given we think that the old queen was lost on the 11th when first swarm came off, and not returned to the hive as you suppose. This being so, the swarm of June 18 may be regarded as a second swarm, though containing the bees of a first or top swarm. The probability, therefore, now is that the parent hive is now headed by a young queen, and if the latter get safely mated all will go on right. Any way, you may ease your mind with regard to any more queen

cells being formed ; and if the combs are now examined, eggs and brood will most likely be found in the cells, along with the young queen.

[2899.] *Stocking "Wells" Hive by Dividing.*—Can I adopt the following plan to stock a "Wells hive"? I propose to place a swarm in the hive, and after the bees have drawn out and filled eight frames of foundation with eggs and brood, to introduce the excluder dummy and place four combs of brood with four extra frames of foundation on either side, and then cage a fertile queen on the queenless side. Is this feasible? if so, how soon would it be wise to liberate the queen? Your valuable opinion on this matter will greatly oblige.—ALEX. L. GRIMSHAW, *Ashton-on-Mersey.*

REPLY.—We think the success or failure of the plan stated will be very much a matter of chance, seeing that unless the bees can be got to work separately as two stocks you will not easily get one half the colony to cross over, so to speak, and accept an alien queen while their own mother bee is in the next compartment. As a method of dividing a stock your plan is crude, and we think it will fail for the reasons given.

[2900.] *Dealing with Queenless Stocks.*—Having a stock of bees in frame-hive which is queenless and containing no brood, but fairly strong, do you think it likely to prove a success to remove a skep and put on top of frames of queenless hive after the skep has sent off a swarm? The hives near the queenless stock are strong, with surplus-chambers on, so do not want to unite to them. Shall be pleased to send up a photo of part of my apiary if you care to see it, as being, perhaps, not unworthy a place in BEE JOURNAL.—NEMO, *Deddington, Oxon, June* 9.

REPLY.—Though not entirely free from risk to the bees in skep, we think the plan of utilising the queenless bees is fairly safe. It would also do away with the issue of a second swarm from skep, and give the latter a good start off with a fresh supply of field workers. We shall be glad to know how the plan succeeds, as it is novel to us. Send on photo by all means and if suitable it will be inserted.

PRESS CUTTING.

HONEY A NUTRITIVE LAXATIVE

Sir James Sawyer, the well-known physician, is never tired of dilating upon the virtues of honey. Addressing the members of the Warwickshire Bee-keepers' Association recently, he declared that honey was a nutritious food, capable of administering to every activity of the body and mind, of muscular action, and of resistance to cold and disease. If we consume ordinary sugar it has to be changed into glucose before we can assimilate it, but the bee has already done that for us with regard to the sugar-solution which it took from the flower. Besides being nutritive, honey is valuable as a laxative.—*Science Siftings.*

Bee Shows to Come.

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A.

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, hon. sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. Schedules from John Maughan, secretary, Blake-street, York. **Entries close June 28.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22, Leam-street, Leamington. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13, at Radstock, Bath.—Honey show in connection with the annual show of the Radstock and District Horticultural and Fancier's Association. Schedules from the Secretary, B. M. Clark 1, Fox Hills, Radstock, Bath.

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fête in "The Quarry." Bees, Honey, Hives, and Appliances. Thirteen Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes

for Honey-Trophy, Sections, Extracted Honey, Beeswax' Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. Entries close August 2.

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. Entries close August 30.

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. Open to all British Bee-keepers. Special attention is directed to the new Honey-selling Classes. Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. Entries close August 26.

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. Seven open classes, including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with free entry. Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. Entries close September 3.

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. Entries close September 1.

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. Entries close August 23. Double fees to August 30.

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules ready shortly, from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. Open to all British Bee-keepers. Special attention is directed to the new Honey-selling Classes. Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

F. J. (Mountmellick). — *Bees Dying in June.*—The dead bees sent afford no clue to cause of death. It is by no means safe to assume that food is sure to be taken when offered to a stock known to be short of stores. Indeed, it is not seldom found to be quite a task even for an experienced hand to start bees in carrying the food down when offered them; once they get accustomed to the feeder, however, all will generally go well. We have heard of several cases this spring where bees have starved to death of hunger with a feeder on.

Italian Queen (co. Cork). — *Race of Bees.*—The dead queen sent was smashed in post and quite unfit for judging with regard to mating. The most we can say is the insect is a hybrid Italian-black queen, not at all distinctly marked but apparently an adult. Whether mated or not we cannot say.

Novice (Stafford).—*Dead Queen Cast Out.*—1. The bee sent is a fully-grown adult queen. 2. It will save time to give the bees a prolific mother at once, as proposed, if you can readily obtain one.

W. L. T. (Atherstone).—*Black Bees in Hives.* The shiny black appearance of the thorax and upper side of the abdomen in dead bees sent is caused by the fact that all the pubescence or hairiness has got rubbed off in the pulling about robber bees receive when fighting or struggling for possession of the stores of the stock being robbed out. The mischief will cure itself when honey is abundant outside.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor Bee Journal," not "Manager."

The Waterside B.K.A. (Yorks).—While we have not much doubt that the comb sent is from an affected hive we would prefer a sample of comb with brood in it to judge from. There is not a trace of brood in the comb sent, and if you have the breeding combs now in use to cut from, a better piece might certainly have been chosen.

Halifax (Ilkley).—Without being a bad case, there is undoubted foul brood in the hive from which sample was taken.

W. Hayman (Sidmouth).—Foul brood is developing in comb, but it is not a bad case, and as the outbreak is only a recent one, we consider that no blame can be attached to seller of the stock a year ago.

C. Marks (Devon).—Sample No. 1 contains mouldy pollen only; in No. 2 there is fresher pollen and web of wax-moth with larvæ of same alive.

Wm. Gray (Alnwick).—Comb is decidedly affected with foul brood.

J. W. (Winchcomb, Glos.).—Foul brood is rapidly developing in comb.

B. P. (Caerleon).—We find slight signs of incipient foul brood in comb. With only three cells to judge from it hardly gives us a fair chance of diagnosing.

*** *Several letters and queries are in print and will appear in our next issue.*

Editorial, Notices, &c.

AN AMERICAN BEE EXHIBIT.

645 HIVES OF BEES ON SHOW.

We have much pleasure in complying with the request of the General Press Bureau, St. Louis, U.S.A., to publish in our journals (weekly and monthly) the following remarkable announcement with regard to the bee exhibit at the World's Fair to be held at St. Louis next year. It will afford British bee-keepers some idea of the way they manage matters in that country of big things. Our American brethren seem to have a passion for establishing for themselves a claim to "The Biggest Show on Earth," and—to use a vulgarism—the following so far easily "takes the cake" in bee exhibits.

We also learn that the World's Fair grounds, acquired up to date, comprise 778 acres, being nearly two miles long and a mile wide in one part, while negotiations are pending for an additional 400 acres. The announcement referred to reads as under:—

"World's Fair Grounds, St. Louis, June 14, 1902.—'The liveliest live exhibit at the Louisiana Purchase Exposition in 1904 will come from Colorado.' Thus spoke Van E. Rouse, the Colorado Springs mine owner and capitalist, during his visit to St. Louis this week with the Colorado World's Fair Commission, of which he is an active member. 'The world generally knows that as a mining country Colorado leads all nations on the globe,' continued Mr. Rouse, 'and this has naturally created the impression outside of Colorado that all the wealth of our magnificent State is hidden underground. Our exhibit at the World's Fair will show Colorado to be not only great in mining, but that it is a world-leader in horticulture and agriculture.

"'The World's Fair management in their plan and scope of the Exposition declared they wanted live exhibits, so in casting about for plans to make our exhibit conform to that idea, we interested one of our wealthiest and most public spirited citizens, Mayor Swink, of Rocky Ford. Mr. Swink is an apiarist, and he has, perhaps, the largest bee-plant in America. He is going to bring his bees to the World's Fair, and they will work here from the time the Exposition opens until it closes. Mr. Swink's plan, which will cost fully 10,000 dols. of his own money, is to bring to St. Louis enough beehives to construct in miniature a counterpart of the Colorado State House at Denver. The bees will then be turned out to find material for honey-making in the country surrounding the World's Fair grounds. It will require about 640 hives to construct the little State House, and in it about five and one-half million bees will work. It will be a great exhibit. In Colorado we make the finest honey in the world. We have one bee-man who works his bees all the year through. In summer they work in his alfalfa fields in Colorado, and in the fall he ships them to his plantation in Florida, where they work among the flowers and orange groves until time to return them to the West in the Spring.'

"In Colorado we have each year a Watermelon day at Rocky Ford, a Potato day at Greeley, a Strawberry day at Canon City, and a Fruit day at Grand Junction. These are holidays, and all Colorado turns out to the celebrations. In 1904 these celebrations will be held in St. Louis, and we expect to bring a good many trainloads of people here to participate in them, and on these days Colorado fruit will be as free as water for those who celebrate with us."

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c, must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4813.] The month just passed has given us a grand contrast in the weather. During the first fortnight it was more akin to the frigid zone than the temperate; then, with a burst of sunshine, the heat-wave stole over us, and we have been sweltering in a temperature equal to anything in the same line in the torrid zone! But bee-keepers will not complain. No, there is not a word of grumbling now amongst us; our erstwhile long faces are as beaming with satisfaction as that of the farmer in his hayfield.

Swarming.—Yes; ample to meet all wants, with second swarms galore, and all within ten days of those cold, dull, sunless days of mid June! Is this the "continual feeding" to keep stocks going, or was it the "touch of Nature" and the colonising instinct of the bee that became excited beyond control? Anyway, our pet theory of non-swarming bees has again been, if not refuted, at least has had a set-back, and we shall have to go over the old path again. Possibly in years to come we may have to acknowledge that our

efforts along the line of "improvement of the honey bee" may be more apparent than real.

Packing Swarms.—To those who sell swarms I would say have your travelling-boxes deeper than wide or flat. I have had mine deeper this season, and, notwithstanding the spell of hot weather, my swarms have all travelled well so far as I have heard, and nearly all were despatched within a week! never such a swarming week before.

Surplus Honey.—Yea, what looks like a "glut" of it; bees working with might and main to fill up all kind of receptacles given them. Sections are no "Chinese puzzle" to them to fill when there is honey to be had for the gathering. I rather think the "puzzle" of the poor bee is where to find the honey in a poor season or district rather than to fill the square sections even with plain zinc dividers. I have had them filled in five or six days—sections put on 27th are to-day (30th) ready for another rack under them. How is that for Beedon? The only thing that "gives us pause" in connection with our sanguine estimate of this season's hopes is the continual click of the mowing machine laying our forage low. Still we must not forget that these grand fields of bee-blossom are not grown for the benefit of bee-keepers, though an allwise Providence has arranged that these busy creatures, the bees, should have the first rifling of the sweets of the flowers, and by so doing make it possible for the farmer to perpetuate his seed for sowing another year; and thus we all rejoice in the plenitude of Nature's gifts, and each feel that our craft does something for the rejuvenating of Nature in the course of the year.

July is now with us—the month of queen-breeding. This is another source of interest, and our endeavour should be to produce the very best queens we can. Do not let us become faddists in this matter. Depend on it, friends, that we shall not very much improve on Nature's way. Bee-keeping, ancient and modern, has had to depend principally on Nature for the perpetuation of the genus *Apis mellifica*. The puny efforts of man has only a parochial effect on the species. The combined efforts expended in no particular line, but rather each on his or her own train of thought and experiment, is not, in my opinion, likely to increase the value of the honey-bee as a honey collecting machine—the so-called long-tongued variety of bees do not pan out in excess of traits over the ordinary bees. All the advance made by our American bee-keeping friends, so frequently vaunted as fixed traits, &c., was eclipsed at the Pan-American Exhibition by a colony of black (or common brown) bees gathering the largest quantity of honey during the time the Exhibition was open. There were, I believe, several noted strains of Golden Italians, possibly some albinos and Carniolans, yet the common black outstripped them when put to a working test.—W. Woodley, *Beedon, Newbury.*

NOTES FROM WYCHWOOD FOREST.

[4814.] This district, from the bee-keeper's point of view, has had a bad time of it, and while the old Forest has been enlivened with the ring of tools and sounds of busy work in the quarries (silent for perhaps a century past) giving welcome work to men all over the county side, the poor bees have suffered dreadfully. Some stocks starved outright, others reduced to severest straits and only saved by care and timely feeding, and then uniting for surplus work when the welcome sun came to revive our hopes. To-day (June 30) the bees are in full swing, so that, to all appearances, something of a harvest will be gathered, and from what I can see of it of good quality.

I have found another use for honey which deserves to be recorded. Having the misfortune to get a tiny chip of marble into my eye while engaged in carving a "capital" recently, and all efforts to locate and remove the aforesaid bit being of no avail, I was recommended to get a drop of honey just on the ball of the eye as I lay on my back, and at last, after some days of pain and inconvenience, the honey gave relief. I therefore thought, with the Editors' permission, that I must "pass this on."

Vagrant swarms are on the wing in this neighbourhood of late, no less than three settling on the trees in Cornbury Park to my own knowledge.

I note that honey was a notable item among Oxfordshire products in ancient times. It is recorded that King Henry I. received so much cash and nine pints of honey yearly from the city of Oxford.

The circulation of Bee Journal is increasing hereabout from what I hear, and one is pleased to notice that local notes are looked for with much interest. There is a bond of brotherhood and friendship growing between readers that must be a benefit to our craft in these days, when one is tempted sometimes to think that the creed of the majority can be summed up in the words, "Every man for himself."—John Kibble, *Charlbury, Oxford, June* 30.

SWARMING VAGARIES.

[4815.] 1. On May 29, at 2 p.m., the bees swarmed from one end of a "Wells" hive (the other end of the hive being empty). This swarm was safely housed in a frame-hive. 2. On Friday, June 6, a second swarm issued from the same stock, and was put into the other end of the "Wells" hive. This swarm was not there the next day, and most probably have crept through in some way to the other bees. 3. On June 10 another swarm came out, and was hived in a small frame-hive, but this swarm also disappeared. 4. On June 14 a fourth swarm issued, and this was again put into the small hive last referred to, and has re-

mained there, and is apparently settling down to work.

So that I have had four swarms from one hive. Nos. 1 and 4 are doing well. Nos. 2 and 3, as I have said, disappeared, and I suppose, for some reason or other, they returned to the parent stock and came out again, forming swarm No. 4. Is this the explanation, as No. 4 was a large swarm?

A few days after the fourth swarm had been settled I noticed that the parent hive from which the four swarms came out, had an enormous number of drones flying in and out, and I, therefore, procured a "drone trap." I caught two traps full and two partly full, and I found one trap *full* contained 660 drones. So that altogether I shall have destroyed from this hive about 2,000 drones, and this after four (or two?) swarms had gone from the parent hive.

I should like to know if there is anything wrong or irregular in this matter of the drones—on the part of the bees in producing so many, or on mine in killing them?—J. C. STOTT, *Sheffield, June.*

[We feel pretty sure that none of the swarms actually made off or decamped. As regards the superfluous drones, you should get rid of three-fourths of the drone-comb now in the hive, and that is all you need trouble about, the rest being quite normal.—EDS.]

REMEDIES FOR BEE-STINGS.

MEDICAL OPINION.

[4816.] I should like to draw the attention of Dr. Phillips (who writes on page 254) to the fact that what he mentions as an oft-repeated statement has long since been abandoned by men who know anything of the chemical properties of formic acid and the poison of the bee's sting respectively. For some time past the idea of formic acid itself being the actual irritant has been given up, and a chemical substance as yet unknown assumed to be the chief cause. I should advise Dr. Phillips to procure Dr. Lauger's various publications on the bee's venom; he will there find more than the information he asks for in the BRITISH BEE JOURNAL.

Dr. Lauger has shown himself to be a master in the work which he has taken up as his special subject.—R. HAMLYN-HARRIS, *Tübingen University, Germany, June* 28.

[4817.] I am a reader of the B.B.J., and having seen that some of your correspondents suffer much from stings, I wonder if they have ever tried freshly-cut onion? We took two old hives to pieces and transferred the bees here, and, with the help of the onion, did not suffer at all. It is also said to destroy the smell of formic acid, and, therefore, prevent further irritation of the bees in case of a sting. We have always used onion for stings of bees and wasps.—E. P., *Birr, Ireland, June* 24.

FOUNDATION AND FOUL BROOD.

[4818.] I entirely agree with Mr. W. Woodley (4799, page 243) as to the probability of foul brood being spread by means of infected comb foundation, and should like to hear the opinions of other beekeepers upon this matter. I have long considered this a most fruitful source of the disease, and have known foul brood break out on many combs built from a particular parcel of foundation in a hitherto healthy apiary. The undoubted fact that foul brood is rare in the apiary of the true skeppist, that is the one who has no frame-hives at all, strongly supports this theory. — JOHN P. PHILLIPS, *Spetchley, Worcester, June* 23.

STARTING ON MODERN METHODS.

[4819.] I am, and have been a bee-keeper in a small way for the past five years. I am fond of them, and have let them live to gather and live on their own store, having "taken" but one stock during that time—and that in the old barbarous way, brimstone pit, &c., which caused such a revulsion of feeling that I have not attempted it since. I have this year already had four swarms, and one a year previously, and now have eight skeps standing. I have ordered a bar-frame hive to begin with, and think of turning my attention to the study and culture of bees for profit as well as pleasure in future. I have taken B.B.J. for a few weeks, and the *Record* for May and June. I should like to join the Association if eligible, and should be glad if you will send me information as to what steps to take in order to become a member.

I am ignorant as to the management of bees, and have ordered Cowan's "Guide Book."—H. L., *Bexley Heath.*

P.S.—I may say I accidentally became possessed of a swarm in 1897 in a chimney pot on my house, which I took off, and put the bees into a straw hive.

[Write Mr. H. W. Brice, Hon. Sec. Kent B.K.A., 100, Brigstock-road, Thornton Heath.—EDS.]

A FEW NOTES FROM YORKSHIRE.

BEES STORING FAST.

[4820.] I am sending you a few notes as to the bee-doings in this part of Yorkshire. I was fortunate in bringing all my stocks safely through the winter. We had exceedingly bad weather in May, a good many stocks in the district being literally starved to death for want of food. Yet there was plenty of bee-forage everywhere around us. I have never seen more blossom on the blackthorn, but the bees were unable to leave their hives at all

until it had almost all died down and withered. However, when the fine weather did at last come, the bees seemed bent on making up for lost time, and supers were soon teeming with busy workers. To-day (June 28) I looked through my hives, and was delighted to see the rapid improvement. I removed twenty-three well-filled sections from one hive, and all stocks with sections on had nearly one rack completed. I find that my bees are a full week in advance of last year in the matter of surplus-storing, and should this fine weather continue for a week or two the bees will do as well, if not better, than usual. —G. A. BARNES, *Thornton Dale, Yorks, June* 28.

BURNING BEES IN TREES.

[4821.] As a reader of your valuable paper, I send on a cutting taken from a Norwich paper of yesterday's date (the *Eastern Evening News*). I think it might serve a good purpose to publish it, as it is a practice every bee-keeper ought to condemn and try and stop.—A BEGINNER, *E. Dereham, Norfolk, June* 28.

BURNING BEES.

To the Editor.

SIR,—Whilst out this evening in the neighbourhood of Catton, I was horrified to see two lads eagerly watching the burning of some straw, paper, &c., which they had placed in the hollow of a tree. The reason for this was that the tree happened to contain a bees' nest. Cannot such acts of shameful cruelty be put a stop to? I would not have ventured on your space, save that I fear this is not an isolated instance.—DISGUSTED, *June* 25, 1902.

WORKING FOR COMB HONEY.

In writing on the production of comb honey I suppose the proper thing to do would be to begin in the fall, tell how to prepare the bees for winter, and build them up in the spring ready for the honey-flow. But as that would take up too much valuable space, I shall assume that they have come through the winter and early spring to the time of fruit-bloom, which occurs about the last of April or the fore part of May in this locality. At this time each colony should be examined carefully, clip all queens that are not already clipped, and note especially the very weak and very strong colonies, for these are the ones with which we have to do at present.

I believe some bee-keepers advise taking brood from the medium-strong colonies to build up weaker ones. I prefer to go to the very strongest colonies. I have been thinking it is better to use up one or two strong colonies to build up several weak ones, than to weaken the medium colonies—to make the weak ones only medium. Take one or two frames of hatching brood (be sure and have the bees just emerging from their cells), place these frames in the centre of the brood-nest, and your colony is strengthened at once. As fast as the young bees emerge the queen will lay in the empty cells, and the eggs will be right where they can be kept warm.

The queen will also extend the brood-nest on each side, as there are now plenty of young bees to take care of the brood. There is nothing like lots of young bees to encourage a weak colony. By continuing this method, always replacing the frames of brood taken from the strong colony with empty combs, we will soon have all the colonies in a flourishing condition and ready for the harvest.

We come now to the time of swarming and putting on the supers, but before we put on the supers I wish to call your attention to the one I have used for the last three or four years, which is arranged in this manner: It is what is known as the T super, the size to fit a 10-frame hive, and will hold twenty-eight 4¼ in. by 4¼ in. bee-way sections; but instead of putting in twenty-eight sections I put in only twenty-four, with a follower at each side, leaving a bee-space of about ½ in. between the inside of the super and follower. It is to the importance of this bee-space that I wish to call your attention. I find the bees will build out and finish the outside sections much quicker and better than without it; it also acts as a ventilator, giving the bees a chance to ripen up the honey very fast. There should also be a space of at least ⅝-in. between supers, and between the cover of the hive and super, for if we expect to have the sections of honey built out and sealed to the top and bottom we must have room for enough bees to cluster to keep up the heat. In such a super there is a living blanket of bees from ⅝ in. to ½ in. thick all over the top and around the sides, and they are bound to produce a first-class article.

Having the supers all ready with sections filled with full sheets of foundation, and a few bait-sections in the first ones put on, we are ready for the harvest; and as the honey begins to come in we are likely to have some swarms; but to prevent this as much as possible I raise up the hives on ½-inch blocks at each corner and give plenty of super-room. But, do all we may, we will have some swarms, which I should manage in this way, and this management is for a long, continuous honey-flow, and admits of very little increase.

I use a 10-frame hive. Provide a hive with five frames containing full sheets of foundation or empty combs, putting them all together in the centre of the hive. When the first colony swarms set the old hive to one side, place the new one in its place and fill up with two frames of honey and three of brood from the old hive, being sure to destroy all queen-cells. Take the brood that will not emerge for four or five days, put on the super at once, and the bees will go right to work. Fill up the old

hive with full sheets of foundation or empty combs; in from five to seven days shake off most of the bees in front of the new hive and use the old one for the next swarm, putting it on the stand of the next colony that swarms, leaving that hive at the side of the stand for seven days, then placing it on a stand of its own, beginning again with a new hive as with the first swarm. In this way we increase only one-third, and our colonies are almost as strong as if they had not swarmed.

By this method the strength of the colony increases from the day it is hived, instead of decreasing for three weeks before there are any young to take the place of the old ones that are wearing themselves out every day.

As soon as the first super is well started, raise it up and put an empty one underneath, and so continue, taking off the full ones as soon as finished. But at any time when the flow begins to slacken, place the empty super on top, which will in a great measure prevent having so many partly-filled sections, as the bees will usually finish the lower ones before going above, especially during a light honey-flow.—G. W. STEPHENSON in *American Bee Journal.*

Queries and Replies.

[2901.] *Transferring Bees and Removing Bees from House-roofs.*—I should be greatly obliged to have you reply on the following points: 1. At the house here a nest of bees has been established and active for several years past. They are located between weather tiling and the plaster on the inside. A few days ago a swarm came from the nest, and with the help of a neighbour I got them hived in a skep. I now wish to get them into a modern frame-hive so as to be able to handle the bees and remove the surplus honey when desirable. How am I to proceed? 2. Again, it is probable the colony in the house-roof may produce another swarm. Should this occur how can I prepare myself so as to secure the bees in the speediest and best manner in a proper hive? Must a skep be used in the first instance? 3. Would you advise my taking any honey from the swarm recently hived or should I leave all its food for the winter? I think these three questions are the chief points I desire information on, but my fourth should have been put first, viz., What reliable instruction book would you recommend and what pattern of hive should I adopt? If you will reply to this and give any hints for getting the bees out of the hive under the tiling and into proper hives, I shall be greatly obliged.—D. S., *Staplehurst, Kent.*

REPLY.—1. Seeing that you are quite inexperienced with regard to bee-work, and that the swarm had been hived for some days before your query was written, we cannot advise any attempt on your part to transfer the bees and combs from skep to a frame-hive. To undertake the task is to court failure, if not disaster. 2. It is, as a rule, advisable to hive every swarm first in a hiving skep, which latter—after the cluster of bees has been shaken into it—is placed on a newspaper or tablecloth spread out on the ground, with its front wedged up to allow any flying bees of the swarm that may be on the wing to gather in. 3. If the weather continues fine it is possible for a good swarm of the current year to gather some surplus in addition to providing plenty of winter stores in the body-box. This, however, all depends on the season and location. 4. You are quite right as regards the importance of providing yourself with a reliable guide-book. No beginner can hope to get on in the craft and be successful without such a work; and when you ask us to name both a book and a hive, we simply say, get the "Guide Book" published at this office; in it will be found instructions on nearly all the points you name.

[2902.] *Dealing with Vicious Bees.*—I have two old stocks of bees and one swarm, all of which are very vicious. They sting any one who goes near them, and, for myself, I may say if I am stung I am unwell for a day or so; so have not been near them this season. 1. Can you tell me if I requeened the hives with, say, Carniolan queens I should get a quieter race? 2. Where can I get some one to catch the old queens? There is no one in my village who knows anything about bees, and I have lost my nerve. I have kept bees for about six or eight years. At first I had an easy lot to work, but, unfortunately, bought from a cottager a very vicious lot, who by degrees impregnated all my hives. I have reduced my apiary in consequence from about ten hives to the three I have now.—S. J. L., *Stratford-on-Avon, June* 29.

REPLY.—1. When bees become so vicious as to be unamenable to handling without risk or great trouble, they are not worth keeping, and the sooner the old queens are destroyed and new blood introduced, the better. You cannot, therefore, do better than purchase pure Carniolan queens for the purpose, as they are the quietest bees extant. 2. Mr. G. Franklin, of Barton Green, Kenilworth, expert to the Warwick B.K.A. would no doubt do all you required if written to.

[2903.] *Delayed Queen Mating.*—I am greatly obliged by your reply to my question in last week's JOURNAL. May I venture to trouble you again? I am sending a queen for your inspection, and should be grateful if you would tell me whether she has been fertilised. Her history is as follows. A hive swarmed on May 30. After hiving the swarm, the parent

hive was examined with a view of cutting out all queen-cells except one. It was found, however, to contain *only one* sealed queen-cell, which was, therefore, left in the hive. On June 15 the hive was opened and the queen found; but she has not yet begun laying. Another week was allowed to pass, and on the 22nd the hive was once more examined. There was not a trace of any eggs, and every vestige of the original brood left by the old queen before the swarm went out was, of course, hatched out. Thinking that, perhaps, something was wrong with the young queen, seeing so long a time had passed without her showing any intention of laying, I carefully picked her off the comb on which I found her, and caged her, along with two or three attendant bees, and am now sending her to you.—BALLYDAWLY, *London, S.W., June* 24.

REPLY.—The queen was quite lively when inspected, and is a well developed and rather fine-looking young mother-bee; and, seeing how adverse has been the weather during almost the whole of the time since she hatched out, it is quite possible she has had no opportunity of becoming fertilised. She is now again in your possession and weather is at last suitable. We think there is a fair chance of her mating and starting to lay in course of a few days.

[2904.] *Transferring from Skeps to Frame-hives.*—This spring I purchased a stock of bees, and should be very glad if you would kindly inform me what variety they are. 1. I enclose drone and worker for identification. I have them at present (as purchased) in a straw skep covered with a cheese-box, and I have placed a body-box containing ten standard frames on top, which the bees have already commenced to draw out. I have a frame-hive ready, and purpose transferring about September 1, putting all the filled and drawn-out combs from body-box into the new hive, and feeding rapidly with syrup until all are full for their winter food, and taking whatever honey there may be in the skep for my own consumption. The bees apparently do not intend to swarm this year, as a fortnight back they ejected the drones, killing many, though I see they still tolerate a small number, ejecting them occasionally in a half-hearted sort of way, but do not sting them and allow them to readily regain an entrance. 2. Is the warmer weather likely to have caused them to alter their treatment of the drones? 3. Would it be reasonable to purchase an Italian queen about August 1 and make an artificial swarm as detailed in Webster's "Book of Bee-keeping"? I am told August is a busy month in this district, as garden flowers are then most plentiful, though bees have to travel over a mile to reach green fields, the borders of Epping Forest, or any other wild food. I should greatly esteem any advice or comments you may be good enough to make, as I may be moving into the Epping Forest district, where heather, also, to a certain extent abounds, in which case I should greatly increase my hives as I get my hand in.—E. W. APPLETON, *Walthamstow, N.E., June* 30.

REPLY.—1. Bees sent are the common brown or native variety. 2. The recent cold weather and scarcity of food have caused the turning out of the drones. 3. If the instructions are carefully carried out, it will, no doubt, work out all right. You should make a point of stimulating breeding, which means "working for bees," until the present month is out if the hives are within reach of heather forage in quantity.

[2905.] *Moot Points in Appliances and Comb Foundation.*—Would you kindly tell me in BEE JOURNAL:—1. What is the advantage of having a bee-space between sections and sides of the rack, as the latter are nearly all made that way now? 2. Do bees *draw out* comb-foundation or do they build on it? My reason for asking this question is, a friend who, like myself, is a BEE JOURNAL reader, argues that they build *on it*, and I cannot convince him that they draw it out. We, therefore, agreed to take your view as decisive on the point.—W. D. W., *Old Benwell, Newcastle-on-Tyne.*

REPLY.—1. You are in error in supposing that all section-racks have a bee-space at sides. It is only when the four-bee-way section is used that this arrangement is necessary, and as the older form of section (*i.e.*, the two-bee-way) is holding more than its own in popular favour the style of rack you name is really falling into disuse. 2. As a matter of fact, you are both equally right and wrong. When bees have foundation with high "side-walls" given them, they thin down the said walls, using the surplus wax for elongating the cell walls. In this way, then, they certainly do "draw it out." On the other hand, if the foundation has only the slightest indication of the cell-form they will build *on it*. In other words, if a sheet of perfectly plain wax is given, the bees will undoubtedly build their comb cells *on it*.

[2906.] *Dealing with Foul Brood.*—Last year I had a present of bees given me by a real friend, but which proved to be a hotbed of "F.B." I had never heard of this bee-disease, and the greatest thing that troubled me was the "stinger." Now I am sorry to say I have had practical acquaintance with this pest, and though I destroyed *that* hive entirely in August last, the disease appeared in another hive this spring. It was very slight when expert pointed it out to me, and he thought there was every reason for its being cured. I fed heavily with medicated syrup, placed naphthaline in hive, and saw bees

increase rapidly. They have filled out brood-nest, one rack of sections, and are working now a second, besides throwing off a good swarm, which, however, was returned. So far that hive promises all right, but of the next to it:—Well, on Friday last, seeing they were not doing as they should, I removed a rack of sections which they are filling and looked into the brood-chamber, and there, to my horror I may say, I found early traces of "F.B." This hive was certified by expert at end of May to be quite healthy. Now, Sir, what is my best course? I have now twelve bar-frame hives, seven of this season, and the remaining three of last year have all swarmed, two of them twice each, and are at present healthy. I now beg to ask the following:—1. Should I deal with them at once, or wait till nearer end of honey flow? 2. Would you advise me to spare bees or send the whole to the brimstone pit? 3. I thought I might unite the two stocks later and feed them up for winter, but whatever remedy you advise I know will be safe, and I will act upon it. Anyway, I am determined not to have "F.B." in my apiary. I intend going in for third-class experts' examination soon, and my only doubt is whether or not to delay treatment during the honey season. I ought also to say that these same hives were new last season, and the one given me was my first—just as an encouragement! My friend knew nothing of "F.B." himself, and was a beginner, and that is how much of this is spread, through ignorance. If I had not joined the Hampshire Association and had expert advice last autumn, my whole apiary would probably have fairly reeked with disease by now, and every one near me, for the one destroyed was in the "spore" stage. I have just examined two hives mentioned, and find since Saturday they are fast sealing up sections. If I were to starve bees for three days after removing them from present hives, it would not be wise to place unfinished super and sections on other hives, I presume.—A. A. A., *Andover, June* 28.

Reply.—1. Under the circumstances and at the present time we should let the bees go on storing honey as long as the ingathering lasts. Then see to the condition of the sealed brood, and act accordingly. 2. Above reply meets the second query. 3. It may be advisable to unite both lots in autumn if bees are weak and combs need destroying, but not otherwise.

[2907.] *Dealing with Virgin Swarms.*—I had a swarm of bees yesterday from a swarm I hived on the 12th inst. What would you have done with them?—John M. Terson, *Dover, June* 27.

Reply.—Return the swarm after cutting out all queen-cells.

[2908.] *Foul Brood Troubles.*—Since writing you with regard to suspicious comb in two hives, and which you were not able to diagnose, I have examined both hives again. One appears to be all right, without a sign of foul brood, but the other is quite without bees. They must have decamped in a body leaving brood in seven combs. I am at a loss to account for this, unless the bad odour has driven them away. They were busy on Friday last, but I could not examine the hives until to-day. I enclose a sample of comb, which I put down at once to a bad attack of foul brood, through the brood being deserted may really be the cause of the present state, I suppose. Appearances alone would point otherwise, and with the care in medicating and disinfecting I was loth to believe that I have another attack. We have, however, skeppists around who take no care, nor care either that we are liable to such mischief through them; and so I must reluctantly give up the pleasant and profitable hobby of beekeeping. I may add that I have destroyed the whole lot—hive, frames and quilts—of the doubtful hive lest others of my eighteen may go.—Wafer, *Worcester, June* 25.

Reply.—There are signs of incipient foul brood in comb. It is no doubt most annoying to have one's efforts to keep disease from the bees thwarted in this way, and we advise you getting the help of the county B.K.A. in an endeavour to bring the skeppists to a sense of reason by means of moral pressure, if nothing else will suffice.

[2909.] *Stamping Out Foul Brood.*—Whilst overhauling one of my hives the other day, cutting out queen-cells, I was horrified at the discovery of signs of foul brood in two or three of the middle frames of the hive. As the said hive is very strong, I purpose waiting until the bees have gathered in the lime-blossom harvest, which will take place in about ten days' or a fortnight's time. When that has taken place, and I have removed the stores, I intend brushing off the bees from the old frames into a skep, covering the same with some open cloth or netting and placing the skep in a cool, dark cellar for forty-eight hours; then shaking them through the top into a new hive containing six frames of wired brood-foundation, and feed them up with about 6 or 7 lb. of medicated syrup during night time. The skep will be burned, together with the old frames, combs, and cloths. 1. Kindly inform me if the proposed procedure is correct, or should I take stronger measures to rid my bees of this scourge. 2. What should be done with regard to stray bees that fall on the ground or escape from the skep during manipulations? 3. I am anxious to re-queen the stock; would this be a good opportunity for doing so by destroying the old queen when placing bees in skep? Would the bees take to a new queen if she were placed with them in the new hive after forty-eight hours of queenless confinement.—Troubled One, *Cornwall, June* 28.

Reply.—1. Yes, you will be doing quite the right thing. 2. You need take no account of stray bees or those that escape beyond

operating in the evening, and, if possible, in an outhouse away from your other hives. 3. In view of the fact that the stock is now very strong, we should not advise re-queening. The present mother-bee is evidently a prolific and good one, and you may "go further and fare worse" in changing, to say nothing of the cost and trouble.

Echoes from the Hives.

Burghwallis, Doncaster.—We have removed our apiary of twenty-eight hives nearly seventy miles by rail, and yet they received no damage whatever, although the hives were all changed out of one truck into another, on account of the two companies having different brakes, making it impossible for one truck to run through. We are very sorry we shall miss the heather harvest, as we do not know of any within reach of Burghwallis.—SCURRAH AND GARNETT.

Wisbech, Cambs, June 23.—We are having glorious bee weather just now, but it has been very unsettled, causing many swarms. I have had five swarms out of four hives. The curious thing was the second swarm out of No. 1, on Saturday last, was an immense one, quite filling a large skep. I put it in a large wood hive, and gave them a super with ten frames and a rack of sections on top of that. The next morning they were all full of bees at work.—JAS. DANN.

SOMETHING ON HONEY-FLAVOURS, MARKETING, &c.

Most people think that honey is honey, and the notable difference in taste between sweet clover, alfalfa, white clover, basswood, goldenrod, and buckwheat, for instance, will give rise to many questions of how they can be secured separately, and give full opportunity to explain the use of the extractor, and why extracted honey can be profitably produced at a lower price than comb-honey; and, in time, you will learn to tell when asked "Which is the best honey?" (before tasting the samples). They are all good honeys, and as to food value one is as good as the other, but I can't tell by looking at you which you like best.

Now, since you like your sweet clover a little mixed with some other, I would say if you have pure basswood honey put in ⅓ alfalfa, and people who like basswood honey will like it better; also to your pure buckwheat put in ⅔ alfalfa and it is so mild it is not noticeable to the taste, only makes the buckwheat flavour less rank, and improves the whole; and you will be surprised to see how many will like it better than any other and order it. Also California sage should be diluted with alfalfa. I say alfalfa because it is so mild and of such good body.

Dr. Miller expresses the idea about too much flavour, and I find it pays to teach people the difference, and label each kind always true to name.

One store sold over 500 Mason jars of honey this season, nearly all candied, because it is cleaner to handle; clerks like to handle it better, and people can take it home safer, and eat it candied or melt it, as they please. The result is all because I took special pains to give every man, woman, and child in the small town, who was fond of honey, a taste of the various flavours, and explained how we kept the various kinds separate, &c. I told them that I would put my honey in the store, always labelled true to name, advised them to remember which kind they liked best, and to call for it at the store. If they ever found I have deceived them, to take it back and get their money. So well has this experiment of thorough canvass succeeded that if I only had the time to go to every town in the United States and do likewise, I could use almost an unlimited supply. I have added two more towns to my list of thoroughly canvassed—educated somewhat in regard to honey. I gave them an opportunity to educate themselves about flavours, and already the stores are asking for more honey. One small town has used over 1,000 lb., while two towns four times its size, on either side, have used 120 lb., all because of a little time in educating people as to what extracted honey is, how much difference in flower flavour, how to melt when candied, &c.

Now, in mixing various honeys, heat from 130 deg. to 160 deg., stir thoroughly, let it stand a hour, and skim what foam rises, then draw off into jars properly labelled true to name, and put in the store and let it candy when it may; the label will explain that.

When I say mixed-flavoured honey, I do not mean adulterated with glucose or syrups—no, no, but mixed one flavour of pure bees' honey (perhaps of strong flavour) with another pure bees' honey of a milder flavour.

Naturally, we would generally get buckwheat honey with some of the last of clover or basswood, and then with some goldenrod, heartsease, or aster, but principally buckwheat; also sweet clover in our country here will get mixed more or less with other clovers, and shoestring, snowdrop, &c.

Oh, for a honey exchange that would see to it that our good honey was properly put on the market, in a standard but otherwise useful package, properly labelled true to name. One man cannot do it. The creamery men see to it that their fancy butter gets to the consumer in good order, and not mixed with oleo; then why should not the bee-keepers do the same, and not throw it on the general market, and let it be mixed with glucose before reaching the consumer, and perhaps labelled "Red Top Clover Honey," or "California White Clover Honey," or, as I saw in Sioux City this winter, "King-Bee Honey?" Such stuff, along with poorly ripened, strongly flavoured honey, tends to disgust the public with extracted honey.

In fact, all my remarks refer to clear or extracted honey.—THOS. CHANTRY in *American Bee Journal.*

PRESS CUTTING.

AN EXCITING BEE ADVENTURE.

An exciting incident occurred at Castle Hedingham, Essex, on Saturday evening and Sunday, in connection with an attempted capture of a swarm of bees and a comb of honey. The bees made their home in a large elm tree near the residence of Mr. V. W. Taylor, J.P. The tree is hollow from top to bottom, and an enterprising resident of the village conceived the idea of lighting a fire at the bottom to smoke the bees out at the top, where he had arranged to catch them. He was then going to get the honey. Unfortunately for him the tree caught fire, and after trying for some time to put it out, thinking he had succeeded, he departed, leaving his ladder and hive near the tree. As it was, the tree was seen on fire just before midnight by Inspector Wapling and P.C. Frost, who, after two hours' strenuous labour, thought they had managed to extinguish the flames. The tree, however, was found to be burning on the Sunday about midday, when several members of the village fire brigade attended and established a bucket service. Happily their efforts were successful. The bees were still about the tree on Tuesday, when some of them showed signs of their recent experiences.—*Essex County Chronicle, June* 28.

TRADE CATALOGUE RECEIVED.

W. P. MEADOWS, *Syston, near Leicester.*—Mr. Meadows' annual catalogue (No. 23) for 1902 is new in shape and has undergone complete revision in substance. It consists of sixty-two pages, well got up, and illustrated from end to end. It is rather a pity to see it coming out so late in the season, but those who need Mr. Meadows' special goods, particularly in extractors, will do well to procure a copy without delay.

Bee Shows to Come.

July 5 to 9, at Carlisle.—"Royal" Agricultural Society's Show. Bee and Honey Section under the management of the B.B.K.A.

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A.

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, hon. sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. **Entries closed.**

August 4, in the Walled Meadow, Andover.—Honey Show in connection with the Andover and District Horticultural Society. Class for single 1-lb. jar of extracted honey (with no entry fee). Also classes for sections, extracted honey (light and dark), bell glasses, honeycomb designs, and beeswax. Schedules from the Hon. Sec., Dr. Gillett, Elvin House, Andover. **Entries close July 28.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22 Leam-street, Leamington. **Entries close July 31.**

August 6, at Neston Park, Wilts.—Honey show in connection with the Atworth and District Horticultural Society. Fourteen classes for Honey and Bees, including classes for single 1-lb. section and single 1-lb. jar, with free entry. Schedules from J. P. Inkpen, Secretary, Neston, Corsham. **Entries close July 30.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, in the Grounds of Hardenhinch Park.—Honey show in connection with the Chippenham & District Horticultural Society. Twelve classes for Honey and Bees, including **open classes** for single 1-lb. section and single 1-lb. jar (with no entry fee). Schedules from W. Small, Secretary, Market-place, Chippenham, Wilts.

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13, at Radstock, Bath.—Honey show in connection with the annual show of the Radstock and District Horticultural and Fanciers' Association. Schedules from the Secretary, B. M. Clark, 1, Fox Hills, Radstock, Bath.

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 16, at Ammanford (S. Wales).—Honey Show in connection with the Ammanford Flower Show. Judge appointed by the B.B.K.A. Liberal prizes for single 1-lb. section and single 1-lb. jar extracted honey, also classes for three sections and three 1-lb. jars light and dark honey. One local class. Particulars from Mr. Ivor Morris, Hon. Secretary, Ammanford, R.S.O. **Entries close August 12.**

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fete in "The Quarry." Bees, Honey, Hives, and Appliances. Thirteen Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax.

Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules ready shortly, from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W.

Notices to Correspondents & Inquirers.

J. EDGERLEY (Lancs.).—*Bee-forage Plants.*—No. 1 is the common trefoil. No. 2. Bird's foot trefoil (*Lotus corniculatus*).

KIRKBY LODGE (Somerset). — *Home-made Extractors.*—1. No home-made extractor we ever saw, or heard of, is comparable to those sold by dealers. The "Little Wonder" extractor will answer well for a small apiary, and can be had for a few shillings. "*Starters*" *of Drone-foundation for Swarms.*—2. No great harm is done, because a swarm will not build drone-comb, even if drone-cell starters be given, until their hive is nearly filled with combs. 3. By "working well in sections" it is meant that the rack is well filled with bees, which are rapidly building comb and storing honey in most or all of the sections.

A. FINCH (Caterham).—*Joining Bee Association.*—The hon. secretary of the Essex B.K.A. is Mr. J. W. Sheppard, King's Head-hill, Chingford.

S. J. LLOYD (Thrapston).—*Dealing with Vicious Bees.*—1. It will certainly tend to remove your trouble if the two stocks are re-queened with Carniolan mothers. 2. The hon. secretary of the county B.K.A. would assist you in getting expert help in re-queening the hives. Write to Mr. S. Noble Bower, hon. secretary, B.K.A., Knowle.

GEO. WM. PERRY (Yeovil).—*Insurance for Bee-keepers.*—By referring to the report of B.B.K.A. Council meeting in our last week's issue, the present position of affairs with regard to the insurance scheme will be clearly understood. Meantime, communications on the subject cannot be officially answered other than by the secretary of the B.B.K.A.

A. N. (Bucks).—*Boys and Bees: A Question of Annoyance.*—The particulars given—of bees being made to cause trouble to labourers working on a line of railway, and so preventing work from proceeding—make it clear that it is the boys who pelt the bees, and so cause them to become irascible and disposed to sting, who need dealing with more than do the bees themselves. Surely you can obtain police assistance to stop the nuisance. If not, we should be inclined to take the law (and a stout stick) into our own hands. If help were needed, surely some friendly bee-man would share your keen sense of the injury and annoyance you suffer through the mischievousness of a few young urchins, and help you to apply the useful stick in putting an end to such mischief.

C. E. P. (Glam.).—*Ants in Hives.*—A useful preventive of these pests is illustrated in Messrs. Jas. Lee & Sons' catalogue.

Suspected Combs.

C. E. P. (Glamorgan). — Comb received, though not at all old, is simply reeking with foul brood. There is no use trying remedies with a weak stock on such combs. The whole contents of the hive and all quilts, &c., should be burnt at once.

BEES (Dolgelly).—There is foul brood in comb, but not of virulent type. The queen was evidently worthless and a drone-breeder, so you took a wise course in destroying the lot.

Editorial, Notices, &c.

THE "ROYAL" SHOW.

CARLISLE MEETING, 1902.

The sixty-third annual exhibition of the "Royal" Agricultural Society of England opened at Carlisle on Monday, the 7th, under ideal conditions so far as regards that important factor, "the weather," is concerned. The enclosed ground comprising the Show-yard extends to both sides of the river Calder, that nearest the Castle being the smaller portion, and in this are displayed the numerous implement stands, machinery in motion, &c. After crossing the bridges—of which there are two—we reach the live stock and produce departments of the Show. Taken altogether, the ground enclosed seems smaller than at Cardiff last year; but with so admirable an arrangement as the plan shows, there is no difficulty in finding one's "way about," so compactly are the stands arranged. Nor is there any undue crowding, the spacious gangways affording ample room for visitors when inspecting the numerous implements displayed on all sides.

Naturally, we made our way to the upper part of the Show-yard and to the spot devoted to the bee section of the Show. And he would be a hard-to-please bee-keeper, indeed, who had a single fault to find with the site allotted to our craft—indeed, we consider it one of the best positions in the whole enclosure. Close to the horse-ring and to the Royal pavilion and band-stand, with a splendid view right in front, the bee-show is set where it cannot fail to be seen by the many thousands of visitors who will naturally make for a point so full of attractions as the one mentioned.

The bee display, though hardly so large as we have seen, makes up a goodly show, notwithstanding the disappointments of an adverse month of June for the bees. Honey of the current year was there, both sections and extracted, and if the quantity was small for so important a show, it lacked nothing in quality, the prize samples being worthy of a front place in an autumn show. Indeed, when we consider that little more than a week of real honey weather sufficed to produce most of the best "stuff" staged it is little short of marvellous to think how rapid was the storing while the ingathering continued.

We shall have to defer till next week a more extended notice of the exhibits as a whole, and for the present confine our notice to the few words above, and the full prize list.

The Rev. R. Errington, Warden Vicarage, Hexham, and Mr. W. Broughton Carr, 17, King William-street, London, W.C., officiated as judges, and made the following awards:—

APPLIANCES.

Class 335.—*Collection of Hives and Appliances.*—1st, W. P. Meadows, Syston, Leicester; 2nd, E. H. Taylor, Welwyn, Herts; 3rd, R. H. Coltman, Station-street, Burton-on-Trent.

Class 336.—*Outfit for Beginners in Bee-keeping.*—1st, E. H. Taylor; 2nd and 3rd, R. H. Coltman; reserve No. and h.c., W. P. Meadows.

Class 337.—*Observation Hive, with Bees and Queen.*—1st, W. Dixon, Beckett-street, Leeds.

Class 338.—*Complete Frame-Hive for General Use.*—1st, Jas. Lee & Son, Silver-street, Holborn, London, W.C.; 2nd and 3rd, W. P. Meadows; reserve No. and h.c., R. H. Coltman; h.c., E. H. Taylor.

Class 339.—*Inexpensive Frame-Hive for Cottager's Use.*—1st, Jas. Lee & Son; 2nd, R. H. Coltman; 3rd, W. P. Meadows; reserve No. and h.c. W. P. Meadows.

Class 340.—*Honey Extractor.*—1st and 2nd, W. P. Meadows; reserve No. and h.c., R. H. Coltman; h.c., E. H. Taylor and W. P. Meadows.

Class 341.—*New Appliance Connected with Bee-keeping, introduced since* 1900.—1st, W. J. Sheppard, King's Head-hill, Chingford (for rack of sections fitted with bee-spaced woven-wire dividers); equal 2nd, W. Cartwright, Moore, Warrington, and W. Dixon (both for combination section-rack for comb and extracted honey); reserve number, H. Cleaver, 8, Northcote-street, Leamington Spa (appliance for glassing sections).

HONEY.

Class 342.—*Twelve* 1-*lb. Sections*—1st, Wm. Woodley, Beedon, Newbury; 2nd, Richard Brown, Somersham, Hunts; 3rd, Gray & Thompson, Long Eaton R.S.O., Derbyshire; reserve No. and h.c., E. C. R. White, New Toney, Newton Toney, Salisbury.

Class 343.—*Twelve* 1-*lb. Sections of* 1901 *or any previous year.*—1st, Jas. Kerr, Milldamhead, Dumfries; 2nd, Jas. Waddell, Wooler, Northumberland; 3rd, W. Woodley; reserve No. and h.c., Wm. Bracken, Tirril, Penrith.

Class 344.—*Twelve* 1-*lb. Sections* (*Heather Honey*) *any year.*—1st, Jas. Waddell; 2nd, J. M. Balmbra, Alnwick, Northumberland; 3rd, W. Dixon; reserve No. and h.c., J. Thompson, Langleeford, Wooler; h.c., F. Garnett, Burgh Wallis, Doncaster.

Class 345.—*Three Shallow Frames Comb Honey for Extracting.*—1st, Jesse Garrett, Meopham, Kent.

Class 346.—*Twelve* 1-*lb. Jars Extracted Honey* (*Light-coloured*).—1st, W. Woodley; 2nd, Thos. Blake, Broughton, Stockbridge, Hants.; 3rd, J. Pearman, Penny Long Lane, Derby; reserve No. and h.c., J. H. Seabrook, Longfield, Kent; h.c., Jesse Garrett; c., E. C. R. White.

Class 347.—*Twelve* 1-*lb. Jars Extracted Honey* (*Medium-coloured*).—1st, J. H.

Wootton, Byford, Hereford; 2nd, Richard Brown (no 3rd awarded).

Class 348.—No entry.

Class 349.—*Twelve* 1-*lb. Jars Extracted Honey of* 1901 *or any previous year.*—1st, Jas. Kerr; 2nd, T. S. Holdsworth, Kirton Lindsey, Lincs.; 3rd, R. Brown; reserve No. and h.c., R. Brown.

Class 350.—*Twelve* 1-*lb. Jars Extracted Heather Honey of* 1901.—1st, Jno. Berry, Llanrwst, N. Wales; 2nd, Jas. Waddell; 3rd, W. Dixon; reserve No. and h.c., Thos. Richards.

Class 351.—*Twelve* 1-*lb. Jars Granulated Honey of* 1901 *or any previous year.*—1st, R. Brown; 2nd, W. Woodley; 3rd, Rev. H. F. Goffe, Thoresway, Caistor, Lincs.; reserve No. and h.c., A. Hamer, Llandlo Bridge, Carmarthen.

Class 352.—*Honey Trophy* (*Attractive Display in any Form*).—1st, Richd. Brown; 2nd, Gray & Thompson; reserve No. and h.c., W. P. Meadows; h.c., R. H. Coltman.

Class 353.—*Beeswax* (*not less than* 3-*lb*).—1st, Jno. Berry; 2nd, E. C. R. White; reserve No. and h.c., Jno. Edwards, Callington, Cornwall; c., R. Brown.

Class 354.—*Beeswax* (*not less than* 3-*lb. in Cakes and Package, Suitable for the Retail Trade*).—1st, Jno. Berry.

Class 355.—*Honey-vinegar* (*Half Gallon*).—1st, J. Gray, Long Eaton, Derbyshire; 3rd, A. Hamer; no second awarded.

Class 356.—*Mead* (*Half Gallon*).—No first awarded; 2nd, A. Hamer; 3rd, J. Bradley, Stoney Stretton, Shrewsbury.

Class 357.—*Exhibit Connected with Practical Bee-Culture* (*including Articles of Food, &c.*)—1st, W. Dixon; certificate of merit, J. Gray.

Class 358.—*Exhibit of a Scientific Nature not mentioned in Foregoing Classes.*—1st, Dr. Percy Sharp, Brant Broughton (Lantern Slides on Bee-keeping).

INTERESTING INCIDENT AT THE "ROYAL" SHOW.

Amongst the visitors to the Royal Show at Carlisle, on Monday, was his Highness Sir Shahu Chatrapati Maharaja, G.C.S.I., LL.D., Maharaja of Kolhapur, and suite. A special demonstration in bee-driving, and other manipulations, was given by Mr. W. Herrod, Expert Apiarist and Lecturer to the B.B.K. Association, for his Highness's pleasure and edification. Mr. Young, the Secretary of the British Bee-keepers' Association, was in attendance, conducting the visitors through the department, and explaining the methods of using the various appliances exhibited. We understand that his Highness was considerably interested in what he saw, and that he has decided to purchase hives and bees, which he intends taking with him on his return to India.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4822.] *Manipulations.*—I have lately advised that these take place as seldom as possible when outside observation shows evidence of successful progress. But when any such outward evidence points to a necessity for investigation, an examination should take place, and any such should be thorough in its character and conclusive in the deductions derived from the internal condition of the hive. The health and strength of the colony should be carefully noted, and especially any signs of disease should be rigidly diagnosed, and then, or at an early date, conclusively tested. Evidences of the presence of a failing or defective queen are generally easily detected, and in such a case prompt measures should be taken for her supercession. Defective or ill-built comb should be removed and replaced by frames with full sheets of foundation.

Veils.—During manipulations a veil should always be in use, or, at least, handy. Although bees as a rule, in the early part of the season, are very quiet and gentle, rarely volunteering a sting, the operator is able to handle them with more confidence when he is armed in proof. When the honey harvest is on, and the bees are being deprived of their stores, it would be foolhardy to go about the work without protection. I prefer a veil of black silk net, as it folds up neatly in small space and can be carried about in the pocket, being thus at all times handy. It also affords a far less obstructed view than the rougher veils formed of green net or wire gauze and net, while its neatness and handiness is in every way an added advantage over these.

Smokers.—A smoker is an indispensable article of a bee-man's outfit. Nothing tends so much to sweeten the temper of bees and make them amenable to discipline as a good smoker judiciously used. Be sparing, however, in the use of smoke, and under no circumstances should it be poured into the hive in heavy clouds, as this upsets the whole internal organisation of the bees' domicile in a way

they are slow to recover from. Moleskin, corduroy, touchwood, and soft brown paper make serviceable fuel. The paper, if dipped in a solution of water and saltpetre, as advised last year in "Notes by the Way," will keep in without fail until it burns down. Many apiarists prefer carbolic cloths, but there is a danger of the honey being tainted by their use, and when hives are to be open for some time the smoker is undoubtedly the best and most effective quietener.

Splendid Honey Gathering.—With fine weather, abundant forage, and a strong force of bees under proper management, it is sometimes marvellous to see how rapidly they store honey in large quantity in a given time. I am not aware what may be set down as a record take for a day, but I know an instance where for a fairly lengthy period a hive on scales showed a daily gain of about 5 lb. The highest recorded addition was 5 lb. 11 oz. on a fine day in early August, while working on the heather. I have repeatedly had hives filling up surplus chambers at the rate of one rack of sections a week, and I have heard of considerably better work being done for weeks together.

Insectivorous Flowers.—Several plants more or less common in this country derive part of their sustenance from catching and eating flies, amongst them being Butterworts, Bladderworts, and Sun-dews. We have at present a profusion of these last-named flowers blooming in the more boggy parts of our moorlands. It is too small for being a good pollen-producing plant, and the particular trait in its conduct which calls for special comment at present is the fact that it is insectivorous—it actually seizes on, digests, and assimilates small flies in considerable numbers. The poor peaty soil in which it grows is so deficient in nitrogenous matter that the plant has to secure it from some other source, and so Nature has provided it with a number of hair-like tentacles stretching outward and upward from the body of the leaf, somewhat like a pin-cushion stuck full of pins, and the head of each of these is represented by a drop of clear sticky fluid which shines in the sun like glistening dew—hence the name Sun-dew. Each drop of this glutinous liquid is a veritable fly-trap. When these leaves are examined, very frequently we find several flies on them in different stages of absorption. The one just newly trapped struggles hard for liberty, but the very efforts it makes only assist the more in holding it a close prisoner. Its movements so irritate the glands that they pour out on it a more copious flow of the secretion. Strange to say, too, the tentacles assist each other, and even the whole leaf has the power of folding in and changing its shape from that of a flat pin-cushion to something resembling a clenched fist. It is marvellous to watch attentively and observe this strange action. It is scarcely credible that anything but a sentient being is capable of such concerted action as is here unerringly displayed. The fly is really digested by the plant and becomes part of its substance. Bees in collecting pollen occasionally brush off some of the dust from the anthers of flowers, and these particles being caught by the drops of acid are also digested and absorbed. The same process takes place if small particles of the white of an egg are administered, but if too large a supply is given it proves the death of the leaf. A somewhat analogous process may be seen in the sensitive plant or Venus fly-catcher, often seen in our conservatories, though the action of the leaf is somewhat different. It is a regular trap and closes quickly, having no glutinous matter to hold the fly in thrall. Both have the rare discrimination to choose only matter which they can readily assimilate, while they reject any substance which is indigestible. The sun-dew if taken up with a good ball of earth and kept moist, may be grown at home for some time, when the absorbing interest its actions engender, will repay the small trouble entailed.—D. M. M., *Banff.*

REMOVING BEES FROM HOLLOW TREES.

[4823.] I thought it might possess interest for readers of our B.J. to have an account of removing bees from a hollow tree, in order to show how it is done. I have taken several lots of bees from trees, &c., and rather like these jobs; they are interesting tasks and a good way of spending a pleasant afternoon. In this particular case the tree, a large ash, had been felled by the woodcutters, who were ignorant of the fact that some 30 ft. up was a strong colony of bees, but when the tree at last fell to the ground the men were quickly made aware of the bees being there, and it was not long before the former were completely routed. Later on I was asked to go and see if anything could be done with the bees, so that the tree could be finished up for carting off. I agreed to go, and, on arrival, I found one of the branches had rotted off, leaving a hole through the bark to a large cavity some 3 ft. by 1 ft., an ideal place for bees. There was a hole through which the bees worked, and this was promptly stopped with an old bag. By "tapping" I judged the depth of the cavity, and set the "woodman" to cut into the tree. In fifteen minutes we found I had hit upon the hole to a nicety, the "saw-cut" being just above the combs. (At this point the woodman fled.) Of course, the proper amount of smoke, &c., was used before the cutting commenced, and during the whole of the operation. I now cleared out the newly-cut hole until the combs were easily seen, and then fixed skep above the combs as close down as possible, stopping up the junction of skep and hive all round as warmly as possible, and commenced to *thud*

the tree with the head of an axe (as we rap the sides of skeps in "driving bees") blowing smoke in at their natural entrance when they commenced to "run" beautifully, and in fifteen minutes or so were all in the skep, a fine, strong, *clean*, *healthy* lot of bees, with a last year's queen. This was on May 10, so you see I got quite an early swarm, and to-day they are as good as any stock I have. The woodman got a nice bit of honey and carried away all the comb for wax. A nice lot of healthy brood, I am sorry to say, had to be thrown away. It took about two hours to do the whole job. Later on, if you wish it, I will send you an account of a stock in a house here, between the ceiling and floor. I have cut a 3 in. hole in the floor and got them now supered and doing well inside the room.—P. S., *Broseley, Salop, July* 5.

A PROLIFIC QUEEN.

[4824.] I read with pleasure the pithy reports of your correspondents, and am now trying to make some return by sending you a few notes from this district. Weather has been very unseasonable until end of June, as I suppose it is all over the country. Bees have done nothing up to now, except increase in breeding; therefore, they are now ready for the opening of the white clover. I never really knew what a prolific queen was until lately. Whit week I found one of my hives queenless, so united it to a fairly strong stock, containing about nine frames of bees and four frames of brood. When united the bees covered about ten frames, so I put the ten standard frames which I had left over on the top as a super. The queen has bred so fast since that I have had to give them another super with foundation. The bees now cover eighteen frames with sixteen frames of brood, without any signs of swarming. The queen was bred last July and crossed with a Carniolan drone. Can any reader show a better record as regards a prolific queen's laying?—F. R., *Heeley, Sheffield.*

RAILWAY CHARGES.

[4825.] Can you, or any of your readers, give me any information *re* the above? I have just received a show schedule, and it states: "Honey can be sent by passenger train at reduced rate, at owner's risk." Now, the S. E. & C. R., the only company serving this neighbourhood, have a rate for farm-produce at 4d. for 20 lb., and 1d. additional for every 5 lb. up to 60 lb., provided it is packed in boxes which they supply, or similar ones. Now, these boxes are not suitable for comb-honey, and the rate only applies to London and seaside stations on their system. Will the other companies take it on farther at that rate?

They have another rate for parcels between S. E. & C. stations and stations in England and Wales, by which a parcel of, say, 1 dozen sections (which I could not pack under a gross weight of 24 lb.) costs 2s. for a distance exceeding 100 miles. This, with return carriage, makes 4s., which seems rather heavy. If you, or anyone among your readers who send honey by rail, can help us or explain this matter, it will greatly oblige others, besides myself.

I enclose name and address, and sign myself. —WEALD OF KENT.

[We will be glad if some of our friends who deal with railway companies will send a line of reply to above.—EDS.]

TUNISIAN BEES.

[4826.] I have read with interest the account of the Tunisian bees in the JOURNAL of June 26. I tried a queen of that race when I was in Cornwall, and found the result the same as described. Sometimes there were as many as five queens in one swarm! I fancy the climate suited them there, Now, I should like to try them here, and am writing to ask if you could put me in the way of obtaining a queen which I could add to a swarm of English bees. Perhaps, if your writer has so many, she would spare me one, and I would write and ask if I knew her address.—(Mrs.) T. J. TOMLINSON, *Carnforth, July* 2.

[We think that Mr. E. H. Taylor, Welwyn, Herts., supplies Tunisian queen bees at very moderate prices.—EDS.]

(*Correspondence continued on page* 276.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The owner of the apiary seen on next page, though not personally known to us, is one of the useful bee-men whose uniform success —in a modest way—teaches valuable lessons to those who are always feeling and complaining of the drawbacks in bee-keeping. We therefore need add nothing to the interesting notes sent by Mr. Boon, who writes as follows:—

"My interest in bee-keeping was first aroused three summers ago, this being my fourth season with the bees, and it finds me the owner of five stocks all in excellent condition; at least, that is my opinion of them. Seeing then that you consider the photo sent worth a place in the 'Homes of the Honey Bee,' and want a few lines to go along with the picture in print, I may say I began by buying a stock in a skep in May, 1889, for which I gave £1. Three weeks afterwards this skep sent out a good swarm, which was successfully hived, and then put into a 'W.B.C.' hive. About a month later I braced up my nerves and resolved to drive the

bees from the parent stock, and transfer both bees and combs to another frame-hive. I cut out of the skep all combs containing brood, and tied them into standard frames, fastening the same as well as I could with strips of flannel for a day or two. I then took these off, and all went on well, and, as the weather kept fine, in due course I put on surplus-chambers, and they were soon occupied by the bees, so that when the season closed I had taken no less than 31 lb. of honey. There are, I see, not seldom complaints about trouble in finding a market for honey, and in regard to this I find no trouble whatever in selling my honey at 1s. per lb. Last season I took 83 lb. from two stocks, and after selling all of deal. I also grow borage, sweet marjoram, mignonette, sweet pea, and Canterbury bell. As one reader says, these are only as a drop of water in the sea, but I add my word to say every little helps the busy bee in its work of storing honey. I am also very thankful in being enabled to say that I have never seen foul brood up to the present time.

"I noticed a remark some time ago in one of your journals saying that the bees got salicylic acid (which is a preventive of disease) from the willows. I still use naphthaline myself, and I also keep a strict account of all my expenses and receipts, so that I am able to give items on either side for each year, for by so doing I know exactly how

MR. W. BOON'S APIARY, BRADDOCKS HAY, BIDDULPH, NEAR CONGLETON, CHESHIRE.

this I bought about 18 lb. from other bee-keepers in order to keep my customers together. In this way, then, although not so fortunate as some of your readers who manage to take 150 lb. or so per hive, I am content with my lot, as I might very well be worse off. Besides, the district is not so good as some localities, seeing we live in a valley in which two rivers take their rise—the Trent runs one way and the Dane the other. But if there are better bee-locations, there are also worse ones; and I never forget the real pleasure I get from the bees. To watch the bees in the early spring on the snowdrops, crocuses, arabis, wallflowers, willows, and other flowers affords pleasure worth a good matters stand from the £ s. d. point of view. I have at present nine modern frame-hives, four of which I made during the last winter, and three the winter before; the other two I bought as patterns. With regard to choice of hives, I prefer the 'Cowan,' holding about fourteen standard frames in the brood-chamber. For surplus storage I use shallow frames with wide ends, spacing the frames 2 in. from centre to centre. I use these because only extracted honey is called for about this district. I also had to buy a large extractor, so you see I have had a fairly good outlay on appliances, but at the end of last season the bees had themselves cleared the cost of all appliances so far, and the present spring, as already

stated, finds me with five good stocks well housed and comfortable. But apart from all this, I derive a great amount of pleasure, along with many useful lessons to be learned, from the busy bee. I may thus venture to say, with the shepherd on the hillside of Judea, 'How manifold are Thy works, in wisdom hast Thou made them all.' In conclusion, I have a copy of the 'British Bee-keeper's Guide Book,' and also the 'Modern Bee Farm.' I am a regular reader of your papers, from which I derive great benefit. The photo sent (with figures of myself and daughter) was taken in April last by a friend who is in the photo business in the beautiful village of Biddulph. Wishing to all a good season in 1902."

CORRESPONDENCE.

(*Continued from page* 274.)

FOUL BROOD TROUBLES.

[4827.] If "Wafer" (2908, page 267) would send me the addresses of any neighbours whom he knows or believes to have foul brood, and who do not take steps to prevent mischief to other apiarists, I would do what I can to induce them to allow the necessary examination and action. If any good resulted from my efforts, no doubt "Wafer" would assist our local experts, as these give up much time gratuitously to the stamping out of disease. I am pleased to say that the influence of our Association has recently been used successfully in a similar case.—JOHN P. PHILLIPS, Hon. Sec., Worcestershire B.K.A., *Spetchley, July* 5.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Leipziger Bienen Zeitung (Germany).—Under the new German customs regulations it was arranged that hives with live bees up to 40 lb. in weight should be allowed to enter the country duty free.

The welfare of the home industry was considered in this arrangement, but on more closely examining the question we find that the desired end has not been achieved.

The object of the import of live bees into the country duty free was to enable bee-keepers to refresh their stocks with fresh blood.

But good queens are quite enough for this purpose, and they can be sent through the post at very slight cost.

If more is wanted, a swarm from Carniola or a brood stock from Italy might at the outside estimate weigh 30 lb.

The 40 lb. maximal weight, however, can only operate against the home industry, as whole railway trucks of hives, weighing not more than 40 lb., are sent from Holland over the borders duty free, under pretence of being brood-hives, when in truth they are sent for the honey to be extracted, and the Dutch bee-keeper can thus send the whole of his honey harvest to the German consumer or dealer free of cost.

Dutch bee-keeping is mostly managed in straw skeps with bell-shaped tops and thin straw bottoms. They take all the swarms they can, and it is not often the hives weigh 40 lb., so under present regulations they can be sent quite unchallenged over the borders.

The Agricultural Board at Bonn is therefore trying to get the weight reduced to 20 lb., and for other imported honey to pay a duty of 40m. (about £2) per hundredweight.

Revue Internationale d'Apiculture.—In Algeria, and especially at Mascara, we enjoy an exceptional climate, so that we can hardly say that our bees winter. The lowest temperatures we have noticed here have been 1 deg., 2 deg., 3 deg. Celsius, a decided white frost in the early morning, but from 10 to 12 o'clock in the day 14 deg. C., and conditions favourable to permit our bees to fly freely. Our hives are sheltered under a roof of tarred felt resting on a wall facing the east. It would be impossible to have them in the open, exposed to the full rays of the sun (which, in summer time, attain to 40 to 45 Celsius), for the combs would be melted, and indescribable pillage would result. Our bees ought to "winter" from September to the end of December, during which time not a flower opens; but the climate is so mild that in January the brood nearly fills the hives, and young drones have been seen to fly on January 15. The almond trees yield a great deal of pollen; the bees worked them from January to April, and also the rosemary, which in these mountains is nearly always in flower.

The Italian bee is much shier of going out in wind and cold than our common bee, but in the early mornings all the common bees are at work, while the Italian colonies are still completely quiet.

WEATHER REPORT.

WESTBOURNE, SUSSEX.
May, 1902.

Rainfall, 2·60 in.	Sunless Days, 1.
Heaviest fall, ·27 in., on 3rd and 7th.	Below average, 57·6 hours.
Rain fell on 22 days.	Mean Maximum, 56·6°.
Above average, ·82 in.	Mean Minimum, 39·9°.
Maximum Temperature, 70°, on 25th.	Mean Temperature, 48·2°.
Minimum Temperature, 30°, on 14th.	Below average, 3·1°.
Minimum on Grass, 16°, on 10th.	Maximum Barometer, 30·66°, on 25th.
Frosty Nights, 3.	Minimum Barometer, 29·57°, on 18th.
Sunshine, 183·4 hours.	
Brightest Day, 27th, 14 hours.	

L. B. BIRKETT.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

June, 1902.

Rainfall, 3·32 in.
Heaviest fall, ·69, on 19th.
Rain fell on 18 days.
Above average, 1·31 in.
Maximum temperature, 78° on 28th.
Minimum temperature, 40° on 21st.
Sunshine, 238·5 hours.
Brightest day, 26th, 15·5 hours.
Sunless days, 3.
Above average, 10·9 hours.
Mean maximum, 66·1°.
Mean minimum, 44·9°.
Mean temperature, 55·5°.
Below average, 2·2°.
Maximum barometer, 30·42° on 24th.
Minimum barometer, 29·64° on 20th.

L. B. BIRKETT.

Echoes from the Hives.

The Park, Harron, Ireland, July 2.—The weather has not been advantageous for members of the craft in Ireland. I lost a stock through foul brood; we had removed them into a new clean hive, but they apparently joined themselves to a neighbouring stock; it was the first case I have had. Last week, under the genial sunshine, I had two swarms; I believe there have only been one or two swarms up to this date in the locality. I hope they will do well, but all depends on the weather.—G. F. GILLILAND.

Queries and Replies.

[2910.] *Queen-rearing in July.*—Will you kindly tell me through the JOURNAL if it is now too late to go in for queen raising this season, and when is the proper time? I thought of trying Mr. Brice's plan, as it seemed to me to be the simplest I have seen.—LUNE, *Caton, July* 3.

REPLY.—July is a very good month for queen-rearing.

[2911.] *Frames for Brood Nests.*—I wish to know if I am likely to succeed with a stock of bees I have in a long double hive with two entrances containing eighteen Standard frames with two entrances. It has nine frames in one half, and empty space back of dummy. How will it answer if I let them swarm, and put swarm into the now empty space with "Wells" dummy between? Will nine frames each side be sufficient for queens to breed in? I have never sent a query to BEE JOURNAL before, as I have always found out what I was desirous of knowing from your answers to other novices like myself, and often wonder at the patience you manifest in giving answers to the same questions so repeatedly.—BETA, *Wellington, Salop, July* 3.

P.S.—I have Cowan's "Guide Book," and find it most useful in my apiary, a photo of which I hope to be able to send before long.

REPLY.—Yes, nine frames in each compartment will do well for brood-nests of a double-queened hive.

[2912.] *Syrup in Brood Combs.*—In the autumn I had thirty hives of bees, but owing to spring dwindling I was compelled to unite many lots, and have now only eighteen colonies. Fourteen of the thirty were driven bees fed up, so that I have a large quantity of brood-combs filled with sealed syrup. Upon examining the same last week, I found the syrup leaking from the combs, and it smells quite rancid. 1. If I were to extract it and re-boil, would it be fit for use? 2. If the combs were washed with warm water diluted with naphthol beta, could they be used again? I am sure there will be quite 60 lb. to 70 lb. syrup. If you can answer in your next issue I shall esteem it a favour, as I am wanting some brood-combs.—ECONOMICAL, *York.*

REPLY.—1. Yes, if the syrup is extracted and re-boiled it will be quite fit for bee food. 2. Certainly, so long as they are free from foul brood.

[2913.] *Legal Damage Done by Bees.*—Can you inform me of any cases decided in the Law Courts relative to injury done by bees? I should be much obliged if you could, with references to the reports.—*New Brighton, Liverpool, July* 1.

REPLY.—For four 1d. stamps we can send you back numbers of the B.J. giving instances such as you desire.

[2914.] *Transferring Bees and Swarming Vagaries.*—I have been transferring three skeps of bees to bar-frame hives; I placed each of the skeps on seven full sheets of foundation the second week in April. On June 10, a very strong swarm issued from one hive. I examined hive, and cut out all queen-cells but one, thinking by doing so I should prevent them from "casting"; but on June 17 I had a cast from the same hive, which was as strong as a first swarm. I again examined skep, and found only about a quart of bees, most of which were drones. I drove bees in skep, and found a young queen, which I removed. I put on queen-excluder and returned cast, which are working well now. Do you not think this rather unusual, seeing they had seven full sheets of foundation beneath them? With reference to query No. 2886, page 247 (transferring bees) in B.B.J., June 19, I am always pleased to help my fellow bee-keepers

as far as my experience will allow; so on reading in JOURNAL our brother's trouble, I saddled my "bike" and proceeded to Windleshans, where I found the bees, which were very strong, having drawn out five full sheets of foundation. On turning up skep, I found the three combs which had fallen down, most of brood being hatched out. I removed the fallen combs. The bees had built three new combs in their places, all of which were filled with brood and eggs. I drove the bees remaining in skep, put on queen-excluder, and replaced skep. In three weeks I hope to help our brother in removing skep and placing on supers.—J. T. HURDWELL, *Yorktown, Surrey, July* 2.

REPLY.—We can only attribute the many cases lately reported of swarming vagaries to the cold month of June, which put off swarming in many instances till the young queens had hatched out, and, as in your case, normal swarming and casting were in consequence quite thrown out of gear. Thus old queens and young virgins got mixed up in very singular fashion.

[2915.] *Giving Surplus-chambers to Swarms.*—On June 18 I caught a very large stray swarm of bees and placed them in a frame-hive containing seven frames. I examined them on the 25th and found the whole seven combs fully built out. I then added three more frames (all, of course, fitted with foundation). I examined them again on the 29th and found all ten frames fully built out and a good quantity of brood capped and uncapped in three frames. All combs also stored with a fair quantity of syrup with which I had fed them from the start. The bees are now crowded on eight of the ten frames, and the two end frames are fairly well occupied with bees busy filling up the cells. I therefore ask, what is now the best thing to do, put on supers at once or wait until the end frames are fully crowded? 2. Is not this an unusually quick time to build out so many combs? 3. Is it likely that they would take the syrup from the frames into the supers?—J. GOSS, *Sidmouth, July* 2.

REPLY.—The weather being now entirely favourable for honey-gathering, we should give a rack of sections or a box of shallow frames at once. 2. It is quick work, but not remarkably so, seeing that there was a "very large" one and has been hived over a fortnight. 3. No; honey is too plentiful outside for that to occur.

[2916.] *Loss of Queen.*—On looking through one of my frame-hives to-day I found it well stocked with bees, sealed and unsealed honey, but no brood of any kind, and was rather in a mist what to do (I may say that the super was put on May 28, and it was then full of bees, and they had not taken possession of it), so I took a frame from another hive which contained brood and eggs, and put it in centre of hive. I therefore ask, Was this the best thing to do under the circumstances?—J. B. ARCHER, *Market Deeping, July* 7.

REPLY.—Probably the hive has swarmed, and the virgin queen has not yet commenced to lay. You would do quite right in giving frame containing eggs and brood. If it is certain that the stock is queenless a better plan would be to introduce a fertile queen.

[2917.] *Bees Refusing to Enter Supers.*—I would like your opinion on the following:—I have four hives, one of which is doing exceedingly well, but the other three which had their supers put on at the same time have practically never been into them. Yesterday I had a swarm from one of these hives, which seems to me very odd, as I should have thought they would have filled the super before swarming, and, as for the others, I cannot understand why they do not occupy them. Can you tell me what is the cause of this?—H. E. BECKETT, *Sheffield, June* 28.

REPLY.—To tell the "cause" of bees refusing to enter supers, with any degree of certainty, would require a personal inspection of the hives referred to, and no amount of personal experience will alter this fact. All we can do, therefore, is to explain the principles that guide bee-keepers who know their work, and that is, given good weather, available bee-forage, and strong stocks, it only needs to place properly-prepared surplus-chambers (or supers) over the brood-nest, pack them warmly, and the bees will take possession and work in them with a will. The *essentials* are as named above, the rest is *management*, and this will come to those who strive after it. No doubt we could explain the "whys and wherefores" if we had the hive open and could handle the combs; otherwise, it is little more than guess-work.

[2918.] *Ancient Bee Books.*—Through the kindness of a gentleman in this town I have been lent a copy of "The Feminine Monarchie; or, The Histori of Bees," by Charles Butter, Mag^{d}. Oxford—Printed by William Turner for the author. MDCXXXIV. Can you tell me if this work is well known, and whether copies of it are procurable? I presume it is a valuable work.—CYMRIC, *Winchester, June* 28.

REPLY.—There are several editions of Butter's "Feminine," some of which are more valuable than others. With regard to copies being "procurable," they may be had by paying the market price from well-known dealers in ancient books, and occasionally a copy is "picked up" at a second-hand bookstall for a moderate sum. We will ascertain from a competent authority the market value of the edition referred to, and print his reply later on. Meantime we may say that in former volumes of this journal may be found many interesting articles on "Ancient Bee Books," one specially devoted to Butter's work among them.

Bee Shows to Come.

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A.

July 23, at Tadcaster.—Annual Show of the Tadcaster Agricultural and Horticultural Society. **Open Classes** for six 1-lb. sections and for six 1-lb. jars extracted honey (entry-fee, 1s. in each class). Schedules from F. Powell, Hon. Sec., Stutton, Tadcaster, Yorks. **Entries close July 23.**

July 23 and 24, at Cardiff. Glamorganshire B.K.A. in connection with the Cardiff and County Horticultural Society's Show at the Sophia-gardens. Show of honey and appliances. **Open to all British Bee-keepers.** Liberal cash prizes. Schedules from William Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 19.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, hon. sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. **Entries closed.**

August 4, in the Walled Meadow, Andover.—Honey Show in connection with the Andover and District Horticultural Society. Class for single 1-lb. jar of extracted honey (with no entry fee). Also classes for sections, extracted honey (light and dark), bell glasses, honeycomb designs, and beeswax. Schedules from the Hon. Sec., Dr. Gillett, Elvin House, Andover. **Entries close July 28.**

August 4, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Exhibition of the St. Thomas Cottage Garden Society. Eleven open classes. Schedules from E. E. Scholefield, Hon. Sec. Devon B.K.A., Heathfield, Chudleigh, S. Devon. **Entries close July 28.**

August 4, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Four open classes, including one for single 1-lb. Jar of Honey and one for 1-lb. Section. Schedules from C. J. Cooke, Hon. Sec., Edgefield, Melton Constable. **Entries close July 26.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22 Leam-street, Leamington. **Entries close July 31.**

August 6, at Neston Park, Wilts.—Honey show in connection with the Atworth and District Horticultural Society. Fourteen classes for Honey and Bees, including classes for single 1-lb. section and single 1-lb. jar, with free entry. Schedules from J. P. Inkpen, Secretary, Neston, Corsham. **Entries close July 30.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, in the Grounds of Hardenhinch Park.—Honey show in connection with the Chippenham & District Horticultural Society. Twelve classes for Honey and Bees, including **open classes** for single 1-lb. section and single 1-lb. jar (with no entry fee). Schedules from W. Small, Secretary, Market-place, Chippenham, Wilts.

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13, at Radstock, Bath.—Honey show in connection with the annual show of the Radstock and District Horticultural and Fanciers' Association. Schedules from the Secretary, B. M. Clark, 1, Fox Hills, Radstock, Bath.

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 16, at Ammanford (S. Wales).—Honey Show in connection with the Ammanford Flower Show. Judge appointed by the B.B.K.A. Liberal prizes for single 1-lb. section and single 1-lb. jar extracted honey, also classes for three sections and three 1-lb. jars light and dark honey. One local class. Particulars from Mr. Ivor Morris, Hon. Secretary, Ammanford, R.S.O. **Entries close August 12.**

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fête in "The Quarry." Bees, Honey, Hives, and Appliances. Thirteen Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 27 and 28, at Uttoxeter.—Bee and Honey Show in connection with the Annual Show of the Staffordshire Agricultural Society. Fifteen classes for bees, honey, and appliances. Open classes for 12 1-lb. sections, 24 1-lb. jars, and 12 1-lb. jars extracted honey respectively. Schedules from Rev. G. C. Bruton, Hon. Sec. Staffs. B.K.A., Great Haywood Vicarage, Stafford. **Entries close August 2.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single

1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules ready shortly, from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W.

PRESS CUTTING.

HONEY POISONING.

(From our own Correspondent.)

SYDNEY, May 27.

Wild honey is not always a safe food, as several Australian prospectors have on more than one occasion discovered to their cost. The aboriginals are said to possess the art of discriminating between the various kinds of wild honey, but have not communicated it to the white man. Yet how disastrous a want of the knowledge may sometimes prove is illustrated by a recent tragical incident in New Zealand. It appears that a Maori, said to be 100 years old, and certainly little, if anything, short of that age, feeling unwell recently, told his friends not to bother about him or to trouble themselves by coming much to the "whare" (dwelling) in which he lived alone. He said he would find a grave for himself, which they understood to mean that he would probably retire to one of the caves near there and die. Recently he was missed, and eight stalwart Maori men started to search for him. Having been unable to find him, they retired in the evening to his whare, and in their hunger regaled themselves with honey from one of his hives. They were soon taken very ill, and recognised that they had eaten honey gathered by bees from poisonous tree blossoms. Five of them are dead, and the other three have recovered after fearful sufferings. One of them has his tongue badly mangled as the result of convulsions. A constable was subsequently instructed to destroy the remainder of the honey, except a sample for analysis.—*Eastern Daily Press.*

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

G. W. S. (Rugby).—*Experts' Certificates.*—1. Intending candidates who are not members of a county association should write to Mr. Edwin H. Young (secretary, British Bee-keepers' Association, 12, Hanover-square, London) for information regarding particulars required. 2. There are no fixed places for holding examinations except at the apiary of the B.B.K.A., which is established at the Horticultural College, Swanley, Kent. All other exams. are held at the most convenient place available. They are usually held in connection with the annual show of the county B.K.A. concerned, and the county secretary makes the needful arrangements, acting in concert with Mr. Young, as secretary of the central body, in London. 3. Messrs. Newton & Co., opticians, Fleet-street, London, supply slides on bee-keeping, as do several others whose names may be had from Mr. Young. 4. As our Mr. Cowan is at present some 6,000 miles away from England, please address "Editors" when writing to this office.

J. PALMER (Sussex).—*Parent Stock Found Dead Three Days' after Swarming.*—There is, to our mind, no other possible way of accounting for the bees being found dead other than the one you suggest, viz., the bees having been killed by some one or somehow.

W. W. (Glasgow).—*Young Queens and Mating.*—1. The young queen leaves the hive for her mating trip in from three to five days after hatching out, unless delayed by adverse weather. 2. When fertilised, she usually begins to lay in about three days.

E. J. B. (Southampton).—1. "The Bee-keepers' Practical Note Book" is out of print at present. A new edition will be issued in a few months' time, and will be announced in B.B.J. when ready. 2. No, the course you mention is unnecessary.

FORRESTER (Lyndhurst).—*Dealing with Foul Brood.*—If there is risk to healthy hives, and no experience, it is safest and best to destroy diseased stocks out of harm's way.

WM. WOOD (Brownhills).—*Dead Queen Cast Out.*—The insect sent is evidently an adult fertile queen.

T. E. (Waddesden).—*Insect Nomenclature.*—The insect is a queen hornet.

Editorial, Notices, &c.

ROYAL AGRICULTURAL SOCIETY.

CARLISLE MEETING, 1902.

(*Continued from page* 272.)

The necessarily brief notes of the "Royal" show despatched on Monday night for publication last week included a remark on the ideal weather prevalent when we wrote, which, as time went on, proved sadly wide of the mark.

In fact, it has been a moot point among Cumberland folk who remember the memorable "wet show" of a dozen years ago, which of the two was the wettest, that of 1880 or the recent one of 1902. All we can say is if the second and fourth show-days of last week were surpassed in discomfort to visitors at the "Royal" of 1880, it must have been bad indeed.

Although the weather on Wednesday was fairly fine while the show remained open, no sooner had the visitors left the ground than rain fell in torrents, and in consequence the first shilling day was ushered in by quite deplorable conditions in the show-ground. Nevertheless, nearly 47,000 visitors passed the turnstiles, and bore themselves with remarkable good humour when trudging through the rain and mud, four or five inches deep in viewing the stands.

Thus it comes about that the final one of the migratory shows of the Royal Agricultural Society was unfortunately made memorable by adverse weather conditions which greatly marred what would otherwise have been a gathering to be remembered for all time.

The bee department remained from first to last one of the best placed and most popular points of the show-ground, and never do we remember a time when larger crowds gathered round the bee-tent listening to Mr. Herrod's plain, terse, and well-delivered lectures and demonstrations with the bees.

Coming to the various classes, they were fairly well filled, though the distance away and the "busy time" no doubt kept some of our best manufacturers in the south away. The total entries numbered 154, and, as usual, there were some absentees, whose intended exhibits could not be staged owing to the late adverse bee-weather.

Class 335.—*Collection of Hives and Appliances.*—An excellent display this was; remarkable for the absence of anything in the shape of inferior goods. Indeed so close was the competition that well on for two hours of the judges' time was expended on this class alone. In saying this, we need not analyse the exhibits. All were good, and the awards carefully did the "grading," so they must speak for themselves.

Class 336.—*Outfit for a Beginner in Bee keeping.*—Seven exhibits were staged in this class, and we hardly know how to report on them, so difficult is it to see how some of the "Outfits" can be sold for the price (30s.) with any profit to the maker. Mr. E. H. Taylor's 1st prize one was a marvel at the figure; in it were none but good articles, well made and efficient, no essential for starting bee-keeping (except bees) being omitted. The prize exhibits were all good value, and well worth their awards.

Class 337. *Observatory Hive with Bees and Queen.*—This class was, for the reasons already mentioned, very poorly filled, Mr. W. Dixon taking first with a neat well-furnished hive.

Class 338. *Complete Hive for General Use.*—Though only seven entries were staged in this important class, there was no falling off in the quality of the exhibits, but rather the other way, good workmanship being now a primary object with all manufacturers who hope to win prizes. In this direction we are very pleased to note that the reliance on wire nails for building up hives is slowly but surely giving place to either the genuine dovetail joint for all corners or, what is almost as good, the mortise joint, as in the one-piece section. This is a decided step forward, and we hope to see it adopted by all-hive-makers. Messrs. Jas. Lee & Son were first with a "W. B. C." hive that really bore out its name —which is not the case with some bearing those sometimes much-abused initials. It was not a "non-swarmer," but a reliable article for "general use," as per schedule.

The second prize went to Mr. W. P. Meadows, as did also the third, the higher award going to a hive of similar type to Messrs. Lee & Son, but with a non-swarming-chamber added, the latter appliance being fitted with a small window back and front, which enabled the bee-keeper to tell when the bees had taken possession of the bottom-chamber without withdrawing the latter.

Mr. Meadows' third-prize hive may be described as a "W.B.C." on the "X L All" plan, and also had a non-swarming chamber, not fitted with windows.

Mr. Coltman had the reserve number and a high commend for a good and well-made hive, similar in type to those already mentioned, but instead of a loose stand the legs were fixed to the floorboard.

A high commend was also given to Mr. E. H. Taylor for a capitally-made dovetailed hive of similar type to those already mentioned, also a "non-swarmer." But for a few minor faults — easily remedied — this hive would have been higher up in the prize list, for in material and workmanship it was all that could be desired.

Class 339. *Inexpensive Hive for Cottagers' Use.*—Six exhibits were staged in this class. Messrs. Lee taking first and Mr. Coltman second, with good, useful hives similar in type. Both were well worth the prices affixed, without being cut too low to pay the makers; a thing we were very pleased to see. The third went to Mr. Meadows, for his well-

known and altogether admirable hive for the moors. It is difficult to imagine a heather hive to beat this. Mr. Meadows also took the minor awards in this class for a good hive.

Class 340. *Honey Extractor.*—This class brought seven exhibits, all good in their way, but, as usual, Mr. Meadows was easily first and second, Mr. Coltman taking the Reserve No. and h.c. with a reversible "Cowan" of similar build to the 1st prize one. A h.c. was also given to Mr. E. H. Taylor and W. P. Meadows for machines of smaller type than those named.

Want of space compels us to hold over a brief notice of the honey classes and those for new appliances and new inventions till next week.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4828.] The season for bee-keepers has been an unusually chequered one in "Coronation year" in some parts. I hear of bees that are barely getting a living, while other reports to hand declare that for bees and bee-keepers it has been a "good time." In this district we have had little to grumble about since the 21st ult., but not much to brag of. Honey came in very fast for about a week or ten days; then, owing to the "mowers," the forage was cut down daily till the whole was laid low. The "aftermath," however, is pushing up, but hot days seem to dry up the flower-blooms very speedily.

The Swarming Season. — Swarms came with a rush, and stopped almost as suddenly. We have had casts—or second swarms—only during the past week, and these small in size, showing that parent stocks were much depleted by the large swarms that came off a week earlier. I noticed in one or two cases that the parent hives were practically cleared of bees after swarming. This, of course, precludes work in supers for nearly a fortnight after swarming. No wonder that we, as honey-producers, so earnestly hope to secure a non-swarming strain of bees sometime.

Queen Breeding under the Swarming Impulse.—The question arises—Will queens which were bred in June prove mothers of swarming stocks another season? For myself, I say no; or, at least, not more so than if supersedure had taken place without swarming, as is so often done by stocks that do not swarm. The period of re-queening had arrived, and stocks were preparing for the great annual renewal of the species; then came a few hot days and a honey-flow that gave every encouragement to the bees to go forth and colonise. This emigrating was dependent on the weather rather than on the instinct of the bees. The preparations were made in the usual way, some stocks intending to swarm and some to renew their queens without swarming. Then came the sudden spell of bee-weather, the bees revelling in the glorious sunshine and its consequent inflow of honey, which brought on a sharp attack of the swarming fever—as we call it. But this attack will not affect the queens of 1902. They, no doubt, will be healthy, robust, virile queens, but I see no reason why they should inherit the swarming instinct.

The Blight.—The present season has been notable and remarkable for many kinds of blight, the oaks being so badly infested as to strip them of their foliage; the underwood, too, growing within their shade was stripped of leaves, as the myriads of caterpillars fell from the trees overhead. Fruit trees, plums, &c., also suffered in the same way, in some cases more than half the leaves being now dried up; currant trees, especially the red currant, are now leafless in our district. First came a black blight on the leaves, then the rain washed away part of it, but the leaves fell off, leaving only a sprinkling of currants which are stunted, shrivelled, or very small.

The Honey Crop of 1902.—What about the crop? Now is the time for our Editors to summarise the prospects of the season in a way that those of us whose knowledge is less extended are unable to do. I suggest that postcards go up to King William-street by the thousand, with results compared with last year, and what the prospects are of the late crop. If this is done, we may be in a position to secure the best prices for our produce, and by these means our Editor, in his central position, would be able to afford the craft a positive advantage; nor do I think there is an individual amongst us who would more gladly do this than the one we know as "W. B. C."—W. Woodley, *Beedon, Newbury.*

MORE SWARMING VAGARIES.

[4829.] No doubt every bee-keeper could relate some queer experiences with swarms this year. As I have enjoyed a few, it may be of interest to others to read:—On May 24 (11 a.m.) my first swarm greeted me, and a good one it was, too, settling quite close to ground in a rosebush, so that bees were hived by *handfuls*. All seemed well till, at three o'clock the same day, another came out and, to my grief, rose high into the air and sailed off, and at the same time the occupants of hive number one also re-swarmed and quietly made off, myself after them. These contented themselves with a short ramble, and settled in a

hole in the ground. I successfully hived them again, and placed them in frame-hive in evening, and all is going well.

June 10 next swarm, the greater portion of which had been *drowned.* This was a very strong skep ; and early one morning you may imagine my surprise at seeing the hive and alighting-board black with bees, while clusters had been washed off in a heavy storm. I covered these over and waited till above date for a swarm to come forth.

June 18.—Glorious day ; the first and only day I had been away this spring ; inspected two swarms from skeps, had stands all ready, and had left instructions with my wife what to do. At 9.30 the first swarm issued, but it came from a frame-hive and was successfully hived. At 11.0, another swarm, also from a frame-hive, and this lot, without any ado, united of themselves to the swarm first hived. Soon after, a battle-royal ensued, and second swarm returned to their hive, leaving many dead comrades behind. This was, I suppose, because the "master" was away. Swarms came daily, and in every case except one settled quite close to the ground, till on Tuesday, June 24, when a very large one decamped and settled on the top of the church tower, 50 ft. high. Fortunately the roof is flat and a good one, and here, on the morning of the 26th, I managed to hive them, removing the lead, and scooping out the bees by a handful at a time. This swarm has since then filled ten frames, and the bees are now busy filling a rack of sections.

Still my hives continued to swarm persistently, the last two playing me a fine game. At twelve o'clock on July 1 a beautiful swarm came forth and settled in the lower part of rose bush. At four o'clock on the same day another swarm came out and settled on top of the same bush. One of these came from a frame-hive that had suffered from a slight attack of "F.B." early in the season, so I thought I would treat these carefully by themselves ; otherwise, I should have united the two swarms. I therefore placed in straw skep, after sprinkling the latter with medicated syrup. The other one I transferred to a frame-hive, but here is what happened ! The swarm from the frame-hive next morning entered the straw skep, which latter was a large one, so I hoped the bees would "stay there.' They did "stay" for two days, and to-day (Friday) the whole two lots swarmed out again, and settled on the same bush as before. There was about 11 lb. of bees in that lot. For this latest "vagary" I offer the following reason, which I think is, perhaps, correct :—The frame-hive had been scrubbed with carbolic acid solution for disinfecting purposes, and the offensive smell had not gone when the swarm was hived. Consequently, the bees left. Then in case of the straw skep, some naphthaline was put in with the swarm, and being a very hot day, this evaporated very fast, and the bees were so crowded that they could not stand it, and, in consequence, made off to find another dwelling-place with a less pungent odour. I am to-night once more going to place these swarms in a frame-hive which has been scrubbed with hot soda-water and sweetened. Anyway, I hope they will "stay" this time. It is also possible that my experience with my swarming vagaries in 1902 will be found instructive and not unpleasant reading, so I send the account on.

I had at the beginning four straw skeps to build up my stock and five frame-hives, and have now seventeen stocks, after uniting several. I have had fifteen swarms of my own, and during this season I have hived twenty-one in all.—A. A. A., *Abbottsam, July* 5.

DRONES AND VIRGIN QUEENS.

AN UNUSUAL EXPERIENCE.

[4830.] At the latter end of last week I had a second swarm or "cast" from one of my colonies, and in searching for queens found a "virgin," which I caged for future use. On liberating her later on in a queenless stock the bees accepted her forthwith, but while watching her on the comb I noticed her following a drone, and as I had never seen such behaviour before I was curious to see the result, which very soon came about in unexpected fashion. The young queen attacked the poor drone in a very "unroyal" manner, in fact, just as she would a rival queen, and in a very short time he was dead !—E. Woodham, *Clavering, Newport, Essex, July* 8.

NOTES FROM SOUTH HANTS.

[4831.] In certain respects the present season has been the most remarkable within my personal experience as concerns bee-keeping. My stocks (nine in number) came splendidly through the winter, and about the beginning of May a few of them were in such fine condition that I was tempted by a short spell of promising weather to begin supering with a view to obtaining some benefit from the great profusion of apple blossom. Little or nothing resulted from this, however, and we then entered on that period of cold and rainy weather which will be only too well remembered by your readers. Not one of my stocks reached starvation point, though some came so near it that for a few days I had to watch their condition very closely. The depletion of stores resulting from this state of affairs had the effect of providing the queens with almost unlimited laying space, with the result that when fine weather set in the population of the hives speedily became so overwhelming that swarming set in as the order of the day and raged with a fervour that no efforts seemed capable of checking. For days I was engaged in returning swarms to the hives, after picking out the queens, and in at least two cases this

course proved remarkably successful, the bees resuming work with renewed vigour. So enormous, however, did the population of most of the hives prove to be that, notwithstanding the loss of several swarms, work slackened only to a very limited extent, and the pleasing fact remains to be recorded that at present the honey season promises, with me, to be at least an average one. From one hive I have taken forty finished sections, and smaller quantities from several others, while the contents of many remaining racks are very near completion. Some racks, I may mention, were filled within a week. I recently hived the largest swarm I have personally dealt with. It was, I imagine, a combination of two swarms, and weighed, I believe, not less than 11 or 12 lb.

It is right to add that, from inquiry, I gather that my own experience this season has been more favourable than that of most other bee-keepers in the neighbourhood.—A. ROYDS, JUN., *Soberton, Hants, July* 11.

OVERDOSING BEES.

[4832.] You will perhaps remember me bringing to your office in London early in the present season some comb suspected of being affected with foul brood. This comb you declared to be affected with the disease, but with the help of our expert, and dressing every affected cell with a solution made from Calvert's No. 7 carbolic acid the trouble as regards foul brood was over, for I failed to find any trace of affected cells. But although this was so the brood was not properly sealed over. I brought another piece of comb to show this new trouble, and enlist your help in finding out what was wrong, and you kindly gave me directions what to do. I promptly wrote your instructions home, telling them what to do, and on examining the combs five days after I could see a decided improvement in the appearance of the brood. I examined them again on July 8, three weeks since I saw you, and found brood in perfect condition, and the stock getting very strong. It was, as you said, a plain proof of overdosing with naphthaline, or too strong naphthaline. If you care to publish this in your valuable paper for the benefit of others I should be pleased.—RICHARD ALLEN, *Tusmore, Bicester, July* 10.

DEALING WITH SWARMS.

[4833.] The enclosed piece of comb is taken from a stock that swarmed on June 25, the bees clustering on the alighting board of another hive. I stroked a large part of the swarm into the hiving skep, but on looking at them later I found the bees had decamped. Next day they swarmed again, and were successfully hived. I afterwards examined the brood-nest, and I found several queen-cells; one with its side torn down, from which I thought a young queen had apparently hatched out, and another capped over. The latter I cut out, to find afterwards that it contained only a hard amber-coloured substance. I concluded that the old queen had issued with the first swarm, and had got accidently killed. I therefore removed two frames of brood from lower hive and put them in the super, replacing them with two frames of foundation. This done I returned the swarm. There was plenty of capped brood in lower hive, but no eggs or young larvæ. I yesterday peeped into the super, but the bees were not doing much, so then I examined the brood-nest, and, to my great surprise, could find neither eggs nor grubs—only patches of brood like the enclosed; so I therefore gave them a frame of eggs and brood from another hive, thinking they might be queenless. So what I want to know is—Did I do right? And is comb sent free from disease?—W. C., *Kermincham, Holmes Chapel, July* 9.

[The course adopted was right under the circumstances, seeing that there is no disease in comb sent.—EDS.]

BEE VENOM.

[4834.] I am exceedingly obliged to Mr. R. Hamlyn-Harris (4,816, p. 263) for the information he gives with regard to the researches of Dr. Lauger. May I ask him to amplify his information so as to make it more readily available in this country? Will Mr. H.-H. kindly give the bibliographical references with publishers of Dr. Lauger's publications? I note that Mr. Cowan gives a reference which might be useful on this subject, viz., Hauser, G. "Physiologische und Histologische Untersuchungen über das Geruchsorgan der Insekten." 1880. Could any reader of the B.B.J. give me sight of this pamphlet?—LESLIE PHILLIPS, M.D., *Leamington Spa, July* 9.

BEE NOTES FROM DERBYSHIRE.

[4835] "All things come to him who waits," says the adage. A month since bee-keepers were pulling long faces, but to-day we can rejoice—brood-nests are full and second supers are well forward after three weeks of real bee-weather. On June 21 a bee-friend whom I visited was to my surprise getting supers ready, so I helped him to put them on, and his stocks were a sight worth going to see—twelve frames in a hive (he had only four), ten or eleven in each packed with brood! After the cold, wet time we had, these hives had to be seen to be realised. The maybloom was in full swing, with several fields of "charlock" just coming in bloom, and the bees stored rapidly. On the 11th (Friday last) we extracted over 90 lb. of sealed honey of golden-yellow colour, probably from the charlock, but so thick it would

hardly run through the extractor tap. White clover is also at its best now, but the mowing machine is starting to lay it low. There is a fine clover field within half-a-mile of me such as is seldom seen at Pilsby. Noticing my bees all making that way, I paid the field a visit, and the "hum" was enough to gladden a bee-man's heart, the blossoms being fairly alive with bees. I have had bad luck with two hives, which has taught me that it is no use trying to work up little lots in cold, wet weather, although one weak stock I had a year since proved my most productive colony in the end, owing to the favourable weather. I had another weak lot, the queen of which was worthless, so I killed her, and united the bees to the next stock. The latter sent out a swarm eight days afterwards, the bees clustering on the stem of a large gooseberry bush, impossible to get at with a hiving skep; but we at once popped the latter on the top of the tree, and the swarm marched up into it grand, and after cutting out all queen cells I returned the swarm to the parent hive.

There has been a lot of runaway swarms this year. I went to see an old skeppist the other night who keeps a couple of hives simply for the say of the thing. He never takes any honey from the bees because, as he said, "the bees gathers the honey and they have a right to it." His wife added, "Yes, and we feed them, too." This was true, as I found the bottle under the straw thatching on lifting it up. These good folk still "ring" the bees down when a swarm comes off. May I offer a word of advice to beginners? On no account be persuaded to put supers on without excluder zinc below. I tried dispensing with excluders on two hives this year, one had an adapting-board, but the queen came through it, and I found grubs in drone-comb on one frame. I took it out, exposed the brood for four days to chill it, then replaced the frame; the bees carried out the dead brood, but next day more eggs were found in the comb, so I stopped the queen's game by an excluder. But the other lot beat me altogether; the queen went up right through a rack of sections to deposit eggs in drone-comb in the top super, although she had four new frames of worker-comb ready for eggs in the bottom hive, and I have spent a bad hour or two trying to find her, but in vain, as the hive is so crowded with bees.—Tom Sleight, *Pilsby, Chesterfield, July* 14, 1902.

HONEY AT "OWNER'S RISK" BY RAIL.

[4836.] In reply to "Weald of Kent" (4825, page 274), I beg to say all he has to do is to go to the nearest station, and ask for and sign a general "Owner's Risk" note, which latter will hold good until withdrawn in writing. He will then be able to send and receive all honey at a cheap rate without further bother or trouble. He will also be able to send it by any railway company in Great Britain at the same rate. Use what honey-box you like. Get a time-table from the station which contains "owner's risk rates," and what they carry at that rate. I always know what it will cost me in sending honey to a show before I leave the house with it. I sent 24 lb. to the "Royal," Carlisle, nearly 200 miles, for 1s.; 30 miles, 6d. for 24 lb.; 50 miles, 6d. for 24 lb.; 100 miles, 9d. for 24 lb.; 200 miles, 24 lb., 1s.; any distance, 24 lb., 1s. 3d.—Exhibitor, *Derby, July* 13.

PROLIFIC QUEENS.

[4837.] When reading the letter (4824, page 274) in last week's B.B.J., I thought the following might possess interest. On May 24 last one of my hives sent out a swarm which was hived on ten Standard frames, fitted with foundation. A fortnight later the swarm was supered with a rack of sections. On June 29 I was surprised to see this hive send out a swarm, and on examination I found combs built out in sections, and all ten frames in brood-chamber filled both sides with brood. I also cut out eight capped queen-cells. I may say there has been a good number of swarms in this district, but not much honey has been gathered. White clover, however, looks very promising, and, given fine weather, the bees will no doubt give a good account of themselves.—Geo. Levers, *Loughborough, July* 11.

ESSEX AND SUFFOLK B.K.A.

Mr. Withycombe, the Expert of the Essex and Suffolk B.K.A., has been engaged by the Essex County Council Technical Instruction Committee to give lectures and demonstrations in the bee-tent on the occasion of the Chingford Horticultural Society's Show on Saturday afternoon, July 19 next, in the grounds of Sunnyside, King's Head Hill, Chingford. Messrs. Lee & Son have also been engaged to make an educational exhibit of hives and bee appliances. There are several classes for honey open to Essex.—W. J. Sheppard, *Hon. Sec., Chingford, July* 12.

ITALIANISING BEES.

THE TIME OF SWARMING.

Question.—I see that you sometimes answer questions in the *American Bee Journal*, so I send along a couple. Wishing to Italianise my bees I have thought that it might be done by changing queens during the time of swarming. What I mean is this: If I have my queens' wings clipped and hive the new swarm on the returning plan, can I pick up the old queen while the swarm is out, put an Italian queen in a cage, put the new hive on the old

stand, and when the swarm returns let the Italian queen run in with the bees into this new hive, the same as would the old queen did I not change them? Would it be safe to let a strange queen go in with the swarm?

ANSWER.—From an experience of thirty years I have found that the changing of queens, upon the hiving of any swarm of bees, in any place, is liable to "raise a rumpus," and especially is this the case where the swarm is hived upon a new stand; for in this case the least disturbance or dissatisfaction will start the swarm running out and all over the hive, resulting in the larger part of the bees going back home. And the chances of failure are too great for all practical purposes with a single swarm hived in a new location. Where two or more swarms cluster together, if the new queen is placed in a large cage made wholly of wire-cloth except the stopper, so that the bees can get near the queen in large numbers, and the cage hung with the clustered swarm for half an hour or so till they are led to call her "mother," then this large swarm can be hived where you please, and the queen allowed to run in with the swarm, and as a rule all will go well.

The why of this is that where two or more swarms cluster together they seem to know that strange queens and strange bees must be thrown one with the other, and so are not so disposed to be such sticklers for their own queen, or go back to their brood if they cannot find her with them. But as very few wish to hive two or more swarms together, so that it is possible thus to give a queen, only occasionally, did we so wish to do, this also is hardly practical. The chances are better where the swarm is hived in a new hive on the old stand, or allowed to return as our questioner suggests, and where you have the old queen so you can control her on account of her having a clipped wing; but even then they will sometimes become so dissatisfied that they will hunt up the old hive (unless moved quite a distance from its old stand), and all, or nearly all, go back to it, or, worse still, go into the hives all about the apiary, where in many cases they will all be killed.

If the above large cage is used, placing the cage over the frames before the swarm returns or is hived, and the queen allowed to remain in this cage for a day or two, the chances of success are much increased. The reason for this dissatisfaction coming to the bees is not so much that they have a strange queen, as that $\frac{19}{20}$ths of them consider that they have no queen at all, they thinking thus because when the first few bees come in contact with the strange queen they immediately cluster her so that the most of the bees cannot get near enough even to get a scent of her, and so the majority consider themselves queenless, and all know that it is very hard work to make queenless bees stay in a new hive.

The large cage places the queen so that the bees cannot cluster her so but what the main swarm can "catch the scent," and so they do not consider themselves as being without a queen. On the whole, I would not advise the changing of queens during the swarming season in any way or by any plan, for I find it to be much more annoying to try to change a queen with a colony about to swarm, or with those which have lately swarmed, than with any others, or at any other time of the year, and, besides, a failure more often results.—G. M. DOOLITTLE, *American Bee Journal.*

Queries and Replies.

[2919.] *Recovering Truant Swarms. An Unfortunate Mishap.*—I should be glad of your valued opinion on the following:—1. On Sunday the 5th inst., I had a swarm from a skep. The bees settled on the trunk of a tree in my neighbour's garden, and must have been clustered there from one to two hours before I tried to hive them in a skep. From the position of the swarm it was impossible to shake them into the skep; so I endeavoured to brush them gently in (was this the best plan?), but the whole lot of bees immediately rose into the air, and made across a field, where they took possession of an empty hive about a quarter of a mile from my apiary. I followed them, and at once acquainted the owner of the empty hive—thanks to your valuable remarks a week or two ago *re* swarms decamping—who gave me permission to remove the bees from the abode they had chosen, and take them away in the evening in my own hive. The recovery of my truant swarm so far promised well, but judge of my dismay when, on lifting out the combs of the hive they took possession of, I found the whole ten frames with honey in the cells and reeking with foul brood. On making this discovery I further questioned the owner, who said, "Oh! the bees died out this spring, and I took no further notice of them." Well now, what I would like to know is if I feed the bees on medicated food (as described in "Guide Book") in addition to what they will gather from the limes, do you think there is a possibility of saving them after shaking the bees from the infected combs into my clean hive, or would it be best to destroy the lot later in the autumn after the next visit from our expert? I have placed the hive 30 yards away from my healthy stocks. 2. I examined (by permission) another stock belonging to the owner of the diseased hive, and this is also affected with foul brood. I have advised the owner to allow me to shake the bees (which cover nine frames) into a empty skep for forty-eight hours, then to put them into a clean hive with full sheets of foundation and feed up on medicated food. The skep frames and all things subjected to the infection will be burned.—T. W. C, *Colchester, July* 9.

REPLY.—Under the circumstances detailed

above there is no good reason whatever for destroying the bees in the autumn unless foul brood appears in the combs when packing for winter. The plan proposed to be followed is the right one, and may be quite successful. With regard to hiving the swarm by brushing the bees into skep, it was the very way to bring about the result mentioned. You should have fixed the skep overhead and smoked the bees gently upward.

[2920.] *Immature Drones Cast out of Hive after Swarming.*—I should be glad if you would kindly give me your view with regard to the following event:—About a fortnight ago a large swarm issued from my hive, which I successfully put into a new hive. Yesterday morning I noticed about twenty or thirty dead bees (like the enclosed) on the ground below the alighting board, and the bees were bringing more of them out of the hive as I watched. What is the reason of this? To-day I see many drones on the wing outside. I am only a beekeeper of three months standing, hence my question, which I daresay is very easy for an ordinary beekeeper to solve. I might mention that I have put a rack of sections on the parent hive, and the bees will not go into it at all. Why is this?—(Rev.) E. F. C. EARDLEY, *Glossop, July* 13.

REPLY.—1. The dead bees cast out are immature drones in the imago stage, which are now useless to the colony, because no further swarming will take place this season. 2. Various reasons might be given for the bees refusing to work in sections, but only inspection of the hive, and the way you have fitted up the rack and put it on, would afford a reliable clue to the cause of bees refusing to work in it.

[2921.] *Allowing Bees to Transfer Themselves.*—I have two skeps that were last April placed over the top-bars of a frame-hive for the bees to transfer themselves to the body-box below. I have just inspected the latter, and find five or six of the frame-combs fully drawn out, and apparently containing honey, but I do not see any brood or sealed stores. I therefore ask:—1. Would it be better now to leave the skeps until the autumn? 2. Could I then use the "Porter Escape" to free the skeps of bees? 3. Will the queen establish herself in the frames for the winter so that I should not find her left behind in the skep? 4. Can a queen pass through a Porter Escape? I had a fine swarm on the 18th inst., although a rack of sections was on, and the bees had not attempted to draw the comb in the sections. I am very perplexed and disappointed, as I thought bees would not swarm after taking to sections, even though no honey was stored.—R. J. T., *Romford, June* 27.

REPLY.—1. By all means let the bees store surplus in skep and establish their brood-nest in frame-hive before the season ends. 2. Yes. 3. You should assure yourself of the queen being below before removing the skep. 4. She could, but we have never heard of a queen attempting to do so.

[2922.] *Bees Refusing to Work in Sections.*—The county expert paid me a visit on June 12, and made me an artificial swarm from one of my stocks, putting seven frames fitted with full sheets of foundation in the new hive. I gave the bees 4 lb. of syrup. On June 24 a natural swarm issued from the old stock, from which the artificial one was taken, which I put on six frames of foundation. I supered the first swarm mentioned on June 21, and on the 28th did the same to the second one; but on peeping in to-day I find neither of the swarms have taken to sections. Will you please tell me probable cause and remedy in your next issue.—H. J. P., *Colchester.*

REPLY.—The probable cause is—in both cases—either that the bees do not need surplus-room for storage, or else honey is not plentiful in your district. It must be borne in mind that bees will not store in surplus-chambers until room is needed for brood-raising below. In your case it may take the swarms all their time to build combs and store supplies to last them till next season comes round.

[2923.] *Bees near Meadows.*—Will you kindly advise me on the following? My bees stand in my allotment garden facing south; a hedge at the back; but on the right of bees is a meadow without any hedge, only a wood paling to shelter the bees from the south-west gales. I have a wind-break about 7 ft. high and 8 yards in extent. As I am about to increase my stocks I want, as far as possible, to prevent any accident, or to do something to prevent accidents when the mowing-machine comes. Do you think a wind-break about 9 ft. or 10 ft. high run along the fence for about 10 yards would be sufficient to cause the bees to fly high enough in that direction over the heads of people working among the hay?—WM. PREECE, *Ticehurst, Sussex.*

REPLY.—Such a fence as is proposed would, no doubt, tend very much to minimise possible trouble, but a deal depends upon the way the bees are managed, and the temper of the bees involved. We should advise you to make a point of being present, if possible, when mowing operations begin, and judge for yourself how far the measures taken are effectual for the purpose intended.

[2924.] *Requeening Hives.*—1. If we catch and destroy queens now will it interfere much with the working of the bees? 2. When queens have been removed should we have to see that there is only one queen-cell in the hive in order to prevent them swarming? I may say my hives have not swarmed this season. Reply in B.B.J. will oblige.—R. L. S., *Formby.*

REPLY.—1. Yes, removal of queens will delay surplus-gathering very much. 2. The probability is that removal of queen will do

away with the inclination to swarm entirely so that no trouble will be needed over queen-cells.

[2925.] *Starting Bee-Keeping in Frame-Hives.*—I wish to start bee-keeping in frame-hives, and should be glad if you will kindly tell me how to proceed with my present stock. Two years since, I purchased a stock of bees in a straw skep. On this my gardener placed a smaller skep which was removed last summer and found filled with honey. The bees did not swarm, and this spring another skep was placed on the top as last year, and in June a very large swarm emerged from the hive, and this swarm has been placed in a skep. Now I want to start on a good plan, with a quiet strain of bees. Could I purchase next spring a carniolan queen, and place her with this year's swarm in frame-hive? In this case must I remove the present queen or how? Thanking you in anticipation.—E. B., *Ventnor, Isle of Wight.*

Reply.—It is not difficult to introduce a quiet strain of bees when frame-hives are used, but with regard to keeping bees on modern methods, we need do no more than advise the purchase of a good text-book, without which no beginner can hope to succeed. The "Guide Book," price 1s. 8d., post-free, will afford all the information needed on the subject of bee-management.

[2926.] *Returning Swarms.*—May I venture to ask your opinion on the following point? I hived a very strong swarm in a frame-hive, adding from the parent stock six frames of comb containing brood, &c., and four frames fitted with full sheets of foundation. Owing, however, to my carelessness or inexperience, I must have omitted to cut out all the queen-cells from the comb given, for twelve days later the swarm threw out a very good swarm. This I secured and returned in the evening, but failed to secure the queen. They swarmed again the following day. Having doubts of my ability to get hold of the queen, I left the bees in the skep, which I placed on a stand. It afterwards occurred to me to ask whether the following plan might not have been successful? Place over the sections—three parts filled with honey—the super-clearer, and over that the queen-excluder, and on the latter put the skep containing the swarm. Now, supposing this to have been done as stated, would the bees, having no other means of egress, have worked their way out through queen-excluder and clearer, leaving queen and drones behind, which I could then have removed and destroyed. I mentioned this plan to several bee-keepers of experience, but it was a novel idea to them, and suggested that I should write to you. Thanking you in anticipation for your kind reply in the Journal.—(Rev.) John Schor, *Hants, July* 10.

Reply. — If the super-clearer is properly adjusted the worker-bees would sooner or later pass through the "clearer" and queen-excluder leaving drones and queen in skep. So far, then, your plan would answer, but any brood in skep would become chilled and die for lack of bees to maintain the necessary warmth. You had, therefore, better not try it.

[2927.] *Beginners and Swarms.*—Will you kindly advise a beginner how to act under the following circumstances:—I have a frame-hive which swarmed on June 25. Being away from home at the time, the swarm (a very strong one headed by a 1901 queen) was not properly hived and in consequence the bees took wing and decamped. On my return home five days afterwards I cut out one sealed queen-cell. There were two empty queen-cells, so I thought the new queen had hatched out all right. A friend tells me, however, that unless the empty cell had the little cover or cap hanging to it, it was an old cell. Yesterday (July 8) I examined the hive, and find no unsealed brood or eggs, but plenty of sealed worker-cells and a good deal of sealed drone-cells, which latter I cut out, but I saw no queen-cells. The bees are still very strong and working well. Shall I buy at once a new queen or wait a little longer? I could see no queen, though the hive is full of bees crowded on every frame. They refused to take to the sections before they swarmed, though I took out the outside frame, putting in division board, on which they began to build comb.—Devon, *Sidmouth, July* 9.

Reply.—You should on no account think of requeening the stock without first making quite sure that there is no queen in the hive. By the time you read these lines it is more than probable, from details given, that eggs and brood will be seen in the combs; but if not, then requeening will be the only alternative course to follow.

Bee Shows to Come.

July 17 and 18, at Boston, Lincs.—Show of Honey, Hives, and Bee-Appliances in connection with the Lincolnshire Agricultural Society. Bee Department under the management of the Lincs. B.K.A.

July 23, at Tadcaster.—Annual Show of the Tadcaster Agricultural and Horticultural Society. **Open Classes** for six 1-lb. sections and for six 1-lb. jars extracted honey (entry-fee, 1s. in each class). Schedules from F. Powell, Hon. Sec., Stutton, Tadcaster, Yorks. **Entries close July 23.**

July 23 and 24, at Cardiff. Glamorganshire B.K.A. in connection with the Cardiff and County Horticultural Society's Show at the Sophia-gardens. Show of honey and appliances. **Open to all British Bee-keepers.** Liberal cash prizes. Schedules from William Richards, Hon. Sec., Gabalfa, Cardiff. **Entries close July 19.**

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, hon. sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire

Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. **Entries closed.**

July 30, at Henbury, near Bristol.—Honey show of the Henbury and District B.K.A., in connection with the Henbury Horticultural Society's Exhibition. Seven open classes for honey and beeswax including classes for single 1-lb. section and for single 1-lb. jar of honey (with free entry); prizes, 10s., 7s., and 3s. in each class. Schedules from W. G. Bamfield, hon. sec. Henbury and District B.K.A., Cribb's Causeway, near Bristol. **Entries close July 23.**

August 2, at Helsley, Cheshire.—Flower show and athletic sports. Three classes for Honey and Wax open to all bee-keepers in Cheshire. C.B.K.A. medal for best exhibit by member. Schedules from Dr. Briant, Helsley, Warrington. **Entries close July 26.**

August 4, at Lichfield (Bank Holiday).—Honey show in connection with the Lichfield Floral and Horticultural Society. Open classes for Sections and Extracted Honey. Five prizes each class, 20s., 15s., 10s., 5s., 2s. 6d. Schedules from F. J. Hall, hon. secretary, City Station Wharf, Lichfield. **Entries close July 28.**

August 4, in the Walled Meadow, Andover.—Honey Show in connection with the Andover and District Horticultural Society. Class for single 1-lb. jar of extracted honey (with no entry fee). Also classes for sections, extracted honey (light and dark), bell glasses, honeycomb designs, and beeswax. Schedules from the Hon. Sec., Dr. Gillett, Elvin House, Andover. **Entries close July 28.**

August 4, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Exhibition of the St. Thomas Cottage Garden Society. Eleven open classes. Schedules from E. E. Scholefield, Hon. Sec. Devon B.K.A., Heathfield, Chudleigh, S. Devon. **Entries close July 28.**

August 4, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Four open classes, including one for single 1-lb. Jar of Honey and one for 1-lb. Section. Schedules from C. J. Cooke, Hon. Sec., Edgefield, Melton Constable. **Entries close July 26.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22 Leam-street, Leamington. **Entries close July 31.**

August 6, at Nestou Park, Wilts.—Honey show in connection with the Atworth and District Horticultural Society. Fourteen classes for Honey and Bees, including classes for single 1-lb. section and single 1-lb. jar, with free entry. Schedules from J. P. Inkpen, Secretary, Neston, Corsham. **Entries close July 30.**

August 6, at Clutton, Bristol.—Honey Show of the Bristol B.K.A., in connection with the Clutton and District Flower Show. Liberal prizes. Six open classes for honey and bee-appliances, including classes for single 1-lb. section and single 1-lb. jar extracted honey (entry free). Schedules from Jas. Brown, hon. sec., 31, Bridge-street, Bristol. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, in the Grounds of Hardenhinch Park.—Honey show in connection with the Chippenham & District Horticultural Society. Twelve classes for Honey and Bees, including open classes for single 1-lb. section and single 1-lb. jar (with no entry fee). Schedules from W. Small, Secretary, Market-place, Chippenham, Wilts.

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13, at Radstock, Bath.—Honey show in connection with the annual show of the Radstock and District Horticultural and Fanciers' Association. Schedules from the Secretary, B. M. Clark, 1, Fox Hills, Radstock, Bath.

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 13 and 14, at Dudley.—Annual show of the Worcestershire B.K.A. in connection with the Dudley Horticultural Society. Schedules from A. R. Moreton, Leigh, Worcester, show secretary. **Entries close August 6.**

August 16, at Ammanford (S. Wales).—Honey Show in connection with the Ammanford Flower Show. Judge appointed by the B.B.K.A. Liberal prizes for single 1-lb. section and single 1-lb. jar extracted honey, also classes for three sections and three 1-lb. jars light and dark honey. One local class. Particulars from Mr. Ivor Morris, Hon. Secretary, Ammanford, R.S.O. **Entries close August 12.**

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fete in "The Quarry." Bees, Honey, Hives, and Appliances. Thirteen Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 26, at Cartmel, Lancs.—Honey show in connection with the annual show of the Cartmel Agricultural Society. Open classes for Six Sections and for Six 1-lb. Jars Extracted Honey; also for beeswax in cakes for domestic use. Special prizes for members of the Lancashire B.K.A. and for county bee-keepers. Schedules from Wm. Cragg, secretary, Cartmel. **Entries close August 16.**

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 27 and 28, at Uttoxeter.—Bee and Honey Show in connection with the Annual Show of the Staffordshire Agricultural Society. Fifteen classes for bees, honey, and appliances. Open classes for 12 1-lb. sections, 24 1-lb. jars, and 12 1-lb jars extracted honey respectively. Schedules from Rev. G. C. Bruton, Hon. Sec. Staffs. B.K.A., Great Haywood Vicarage, Stafford. **Entries close August 2.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and

liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules ready shortly, from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** Referring to Tunisian Bees, Mr. A. E. Trimmings, Woodside Apiary, Gedling, Notts, writes as follows:—"I notice in the JOURNAL for July 10 (page 274) a Mrs. Tomlinson asks where she can get some of these bees? If she will send me a ready-addressed envelope I will send a queen, free of charge, as soon as I get a few more on hand than I require."

In our reply to Mrs. Tomlinson we did not deem it worth while sending her the full name and address of our correspondent in India, whose query (2894, page 257) originated Mrs. Tomlinson's request, but sent the name of the only dealer in this country who imports Tunisian queens, viz, Mr. E. H. Taylor, Welwyn, Herts.—[EDS]

A. G. DIXON (London, W.).—*Joining Bee-keepers' Associations*—The Hon. Secretary of the Kent and Sussex B.K.A. is Mr. H. W. Brice, 100, Brigstock-road, Thornton Heath.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

A. H. H. (Catford, S.E.).—We find only chilled brood in three cells of comb sent.

J. N. (Stirchley).—There is foul brood of old standing in sample; besides, the comb is old and dirty, so it cannot possibly be from a swarm of this year as stated.

C. H. B. (Ashley).—In only two cells of comb do we find slight signs of incipient "F.B."

J. A. S. (Warwicks).—Foul brood is spreading rapidly, but it is evidently a recent outbreak if comb sent is a fair sample.

MIDLOTHIAN.—There is no foul brood in comb sent.

ANXIOUS B. B. (Barrowford).—We cannot understand your "expert" having any "doubt" with regard to the comb sent. It is badly affected with foul brood, as should be seen in a moment by any one who has experience of the disease.

E. MATTHEWS (Royston).—Through our absence for several days at "Royal" show, Carlisle, samples of suspected combs sent in meantime were in bad condition for inspection on our return. Yours had so grown over with fungus as to be almost unfit for diagnosing, as will be seen by portion of wrapping sent you by post. There is, however, enough to show decided foul brood in one or two cells.

Honey Samples.

J. CHAPMAN (Belfast).—Honey sent is good in quality, but hardly up to show-bench standard if competition was strong.

E. B. (Glam.).—There is nothing injurious to human beings in honey taken from a hive affected with foul brood. But on no account must it be given to bees as food.

*** *Several interesting Letters and some Queries are in type, and will appear in our next issue.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held on Thursday, July 17th inst, at 105, Jermyn-street, S.W., Mr. T. I. Weston occupying the chair. There were also present :—Dr. Elliot, Rev. W. E. Burkitt, Major Fair, Messrs. W. Broughton Carr, W. F. Reid, T. H. E. Watts-Silvester, F. B. White, and the Secretary. Letters explaining enforced absence were read from Miss Gayton, Hon. and Rev. Henry Bligh, Colonel Walker, Messrs. R. T. Andrews, H. Jonas, H. G. Morris, E. Walker, C. N. White, and E. D. Till.

The minutes of the previous meeting were read and confirmed. The following were duly elected to membership, viz. :—Glamorganshire B.K. Association—hon. sec., Mr. William Richards, Gabalfa, Cardiff ; Ernest Oetzman, Lyndhurst, Slough ; Miss M. A. Digby, Bussage, Brimscombe, Stroud.

The report of the Finance Committee, giving particulars of receipts and expenditure to date, was presented and approved.

The Secretary stated that since the Carlisle Show he had had a further interview with his Highness Sir Shahu Chatrapati, Maharaja of Kolapur, in regard to the bees, hives, and other appliances intended for exportation to India.

Mr. W. Broughton Carr's report on the examinations conducted by him at Carlisle was received, and it was resolved to grant third class diplomas to the following candidates, viz. :—Henry Marrs, David Scott, Jas. Picken, and Jas. Waddell.

Judges and examiners were appointed to officiate at fixtures in the following counties :—Berks, Carmarthen, Chester, Devon, Kent, Lancaster, Norfolk, Somerset, Stafford, and Worcester.

The Chairman and Secretary reported at length upon interviews with one of the solicitors to Inland Revenue at Somerset House, with the Association's solicitor, and other legal authorities, in respect to the technical objections to the issue of the form of insurance premium receipt adopted by the Association. A new form was presented for approval, which Mr. Weston was authorised to submit to Messrs. Heath & Co., the insurance brokers, and afterwards circulate (in place of the existing form) through the various County Associations participating in the insurance scheme. The conditions of the insurance will remain as originally proposed, except in regard to the dates for sending in remittances.

The next ordinary meeting of the Council will take place on Thursday, September 18.

ROYAL AGRICULTURAL SOCIETY.

CARLISLE MEETING, 1902.

(*Concluded from page* 273.)

THE HONEY CLASSES.

The fact of the Royal show of 1902 being held later in the season than it has for a good many years past led to the belief that a big display of the current season's honey would be staged. Eleven extra days at so critical a time for bee-men as the end of June and beginning of July was an advantage not to be regarded lightly, and notwithstanding the distance away from the earliest honey districts, southern bee-keepers made their entries in very encouraging fashion, so that all boded well for a good wind-up to the yearly wanderings of the "Royal," preparatory to settling down on a permanent site near London. That potent factor "the weather," however, spoiled the occasion not only for the show itself, but for the exhibits of 1902 honey, and entries were perforce withdrawn in many cases simply because the month of June was all against the bees, and the full intention to stage exhibits in too many cases went for nought in face of the untoward conditions. The entries showed that the will was there, and small blame can therefore be attached to absentees who had no honey to stage. On the other hand, our best men were represented on the show-bench, those with fifty to 100 or more stocks of bees to help them, and, moreover, located in the choicest districts for yielding "good stuff," so that we may take it that the best honey the country has yielded in 1902 was staged, and the display though small was of very good quality.

Class 342.—*Twelve* 1-*lb. Sections.*—Apart from quantity, this section class was good in nearly all respects ; indeed, we cannot readily recall the time when better exhibits of sections of current year were staged at a "Royal" Show, the 1st prize lot being very good, as were also those which took second place. Both were from sainfoin, and Messrs. W. Woodley and Richard Brown no doubt staged their best dozen for such an occasion. The 3rd prize went to tall sections, which were hardly done full justice to, being in dark brown wood cases and entirely without lace-edging. The h.c. and reserve number were also a fairly good lot, but of the others few were up to "Royal" Show form.

Class 343.—*Twelve* 1-*lb. Sections of Previous Years.*—The winning exhibits in this class—though showing the usual signs of thin capping, *i.e.*, more or less "greasiness," on face of comb—were a presentable lot, as may be inferred from the well-known names of the prize-takers.

Class 344.—*Twelve* 1-*lb. Heather Sections.*—A small but very good show indeed. It is seldom we see well-kept and high-class sections of a previous year on the show-bench, and on this occasion every "win" was well merited in every respect.

Class 345.—*Three Shallow Frames Comb Honey.*—Though five entries were made here only a single exhibit was staged, but this well-earned its 1st prize.

Class 346.—*Twelve* 1-*lb. Jars Extracted Honey of* 1902.—Bearing in mind the adverse circumstances already named this was a good class, Mr. W. Woodley's 1st prize sample being excellent. The 2nd and 3rd were also good. Of the rest, they earned the awards given.

Class 347.—*For Medium-coloured Extracted Honey.*—With the exception of the 1st and 2nd prize lots the class was only poor.

The class for "dark honey" produced no entry.

Class 349.—*Twelve* 1-*lb. Jars Extracted Honey of Previous Years.*—This class made a good show. The exhibits all looked well, and those receiving awards were very good.

Class 350.—A small but excellent class. The winning exhibits were of the "mild flavoured" heather kind, which is, we suppose, popular with more consumers in this country than what are called "strong flavoured" heather honeys.

Class 351.—*Twelve* 1-*lb. Jars Granulated Honey.*—A good class, as may be inferred when we see Messrs. W. Woodley and R. Brown again placed 1st and 2nd—in the order named, with the Rev. H. Goffe, Thoresway, as 3rd, and reserve number and h.c. to W. A. Hamer, Llandilo.

Class 352.—*Honey Trophies.*—Only four exhibits were staged in this class, but all were good, the 1st—Mr. Brown—especially so. We judged it to be almost all—if not wholly—this year's honey: a point which enhanced its value very much. But the sections—among them some 2-lb. ones—and other samples of comb honey, were very good indeed. The 2nd prize lot was somewhat marred by the staging of figures of dogs (cut out with fret-saw) holding in their mouths a small jar of honey. The 3rd prize trophy and that which took reserve number and h.c. were both good.

In the class for cakes of wax for retail counter trade only one exhibit was staged, but it was so good as would need a lot of beating.

The classes for honey-vinegar and mead were poorly represented, the respective awards being barely earned in any case.

The only remaining classes for notice are those for New Inventions since 1900; for practical exhibits connected witth bee-culture, and for those of a scientific nature not mentioned in foregoing classes. We may sum these up by saying that in the first-named Mr. Shepherd took 1st, with a section-rack fitted with the new wire-cloth dividers which provide clustering room for wax-secreting bees, while not incommoding the incoming honey-gatherers. This we consider a very good idea and well earned its place. Messrs. Dixon & Cartwright were placed equal 2nd for an appliance used for an exactly similar purpose, viz., a combined rack for holding sections and shallow frames at same time.

The remaining two classes call for no special notice, being of a familiar kind, each good but not new, viz, Dr. Percy Sharp for his capital lantern slides and the others for sweets and confectionery.

Correspondence.

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

SOME LAWS OF BROOD-RAISING APPLIED TO FRAMES.

[4838.] Nature is generally a safe guide, and man following her example and guided by her dictates seldom strays far from the right path. When he endeavours to amend her deeds or improve on her works he must, if success is to crown his efforts, act in conformity with certain laws; and any breach of these will generally entail failure and disappointment. Let us examine how bees act in certain circumstances when untrammelled by the art of man, and endeavour to discover if their actions will assist us in certain fundamental points of procedure when fixing on the *very best* shape and size of our brood-nest in modern frame hives. Bees found building combs in large spaces, where no let or hindrance is imposed on their will, very rarely, indeed, avail themselves of all the space at their disposal and instinctively construct their dwelling within a measurable compass; and, further, their brood-nest is almost invariably found to conform to certain laws. Two of these are of the greatest importance to us in considering the question of the best shape and size of frame which it is advisable to use in our brood body-boxes. Of course, combs in such homes are deeper as a rule than we use them in our hives, but that is only what might be expected in receptacles forming the double purpose of store and

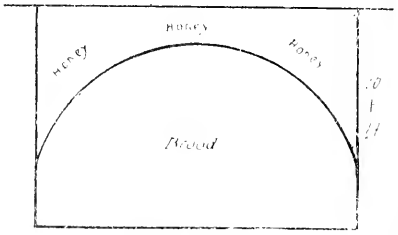


Fig. 1.—Deep Frame.

surplus-chambers. It is found, however, that leaving out of consideration the upper part of this comb, which is rarely bred in, that two points of the utmost importance present themselves prominently to our notice:—1. Brood is found, as a rule, in only a limited area covering a space, roughly speaking, about the

size of our Standard frame. (It is immaterial for my argument if it varies by an inch or so more or less). 2. It always takes an oval form at the crown of the cluster. Several other points deserve attention, but these two are sufficient for the present.

Now, applying these rules to frames larger than the Standard we find that—the frames being deeper, say, than 9 in.—a large part of the stores is deposited in the brood-chamber. The brood does not, as a rule, extend to the top-bar, and, consequently, we have an inch or two in most of the frames occupied by *sealed stores*. Here they serve no good purpose, and, indeed, are an obvious hindrance to rapid storing in surplus-chambers. Bees once accustomed to seal stores below in the height of the season will show an almost incurable reluctance to occupy any super space on the hive. A strong and powerful force will, of course, occupy surplus chambers and store therein under compulsion, but they loaf too much and seem to watch for every unoccupied cell as bees hatch out in the lower frames—thereby crowding out the queen and curtailing seriously the superficial space which is an urgent necessity if she is to do the best work required to keep them up to the highest pitch of perfection. The bees do not like to be cut off far from their brood, and this space of sealed stores acts as a division which they are reluctant to pass over, and hence even a strong lot will not store the same amount in supers in such hives by the end of the season as they would in hives with frames where the

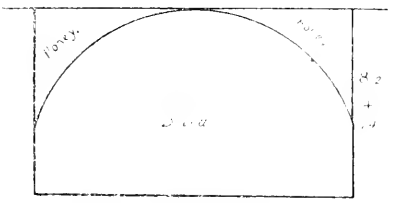


Fig. 2.—"Standard" Frame.

brood just touched on the top cells of the frame.

Even worse faults manifest themselves in frames less than the standard which must militate against the successful development of powerful colonies. The frames being so small, are all required for brood, and consequently there is little or no honey—no store cupboard—in close proximity to the brood nest. So the nurses have impediments placed in their way when all their energies are taxed to the utmost in tending on the larvæ and young bees. Again, the oval form which it seems an inborn instinct in bees to assume in the brood nest, is impaired, and a division and sub-division of the cluster, when a second set of shallow frames are placed above, entails loss of heat, more work to generate what is a necessity, and less perfect results from the work performed by the bees. Such severance of the cluster is utterly reprehensible, as it throws the action of the bees out of gear, and impedes, hampers, and confuses the movements of the queen when we should do all we can to give her every facility in our power. Instances may be given where good results in surplus have been secured in certain seasons from the use of shallow frames, but it is safe to

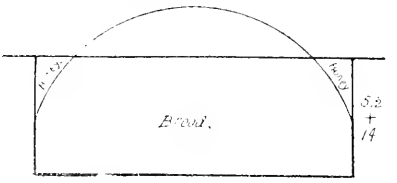


Fig. 3.—Shallow Frame.

say the examples are few and isolated, and at their best they bear no comparison with what has been obtained with larger frames over a series of years.

If the premise with which I started is correct, and it is the fruits of wide observation, the standard frame as nearly as possible provides the ideal breeding-space and store-cupboard necessary for the most successful development of a brood nest, and the consequent attainment of the chief object of the beeman's desire, viz., a strong force of bees ready to roll in the honey when the season opens.—D. M. M., *Banff*.

BEE-KEEPING IN HANTS.

GOOD WORK BY SWARMS.

[4839.] Although the season opened with very discouraging prospects for honey gathering it is ending gloriously in this parts. The bees during the unfavourable weather in May and June bred very fast, cramming the combs with brood, and when the fine weather set in the bees, in spite of surplus-chambers being on the hives, swarmed. But the swarms were, as a rule, very fine, and are now giving a good account of themselves. Two that came under my notice are, I think, worthy of a record in the JOURNAL. No. 1 hived on June 21 on nine sheets of foundation, were examined two days later (the 23rd), and every comb was found to be built-out, the centre ones being occupied with eggs and the outside ones full of honey (not capped over). They are now (July 14) hard at work in a section-rack of sections, which are almost ready to take off. No. 2 swarmed June 25. The parent-hive was removed, and swarm hived on original stand (with super from original hive), the hive being made up as follows :—Two frames of hatching brood from original stock, the rest being foundation, and built-out combs (empty). Thirty-three sections have been taken from the swarm, and they have now a rack of twenty-one sections three parts filled.—F. D. HILLS, *Alton, Hants, July* 14.

LECTURES ON BEE-KEEPING.

[4840.] I would like to call the attention of experts and others who from time to time lecture upon bee-keeping to an excellent syllabus of the subjects generally dealt with in a book now being issued by the Board of Education entitled, "Supplementary Regulations for Secondary Day Schools, and for Evening Schools, from 1st August, 1902, to 31st July, 1903," published by Eyre & Spottiswoode, and may be had by ordering from any bookseller for the price of 4d. There are eight sections of subjects on p. 271 of the publication referred to, and if each of the subjects in the sections are thoroughly understood and given with ease, simplicity, and clearness of expression, they cannot fail to interest an audience. Lecturers would do well to make a note of them.

I think there is great advantage in falling into line with higher authorities; they can be referred to, and while doing so there is great scope for individual effort. The book is worth having at such a low price for the numerous other subjects it contains of an educational character, although they are mostly syllabuses. It will give a person a general idea of how much there is to be learned, and how little of that *much* we know.—JOHN BROWN, *Polyphant, Launceston, July* 21.

BEE VENOM.

[4841.] In reply to Dr. Phillips, I should like to say that until I can supply him with the full details he requires, he will find many useful facts in my review of one of Dr. Langer's articles. The same appeared in the BRITISH BEE JOURNAL of September 5, 1901, under the title "The Poison and Sting of the Honey Bee."

As the paper by Hauser, "Physiologische und Histologische Untersuchungen über das Geruchorgan der Insecten," refers to the olfactory organs, I fail to see how it would be useful to Dr. Phillips on the question of bee venom?—R. HAMLYN-HARRIS, *July* 19, 1902.

TRANSFERRING BEES.

[4842.] Thanks for your advice in B.J., but as others may be in the same difficulty, allow me to discuss the matter somewhat more at length. I had the choice between four plans to transfer my bees—1. To fix the full combs with wire into the "Dadant" frames. This was done in April with a small colony. The result was very bad, as the bees came to grief, probably because of the queen getting lost and the abnormal cold weather at the time. 2. To let the colonies swarm and bring the swarms into the new hives. This was the advice given me by Dutch experts, as they had found that the bees will not work downward when superposing the straw hives. This was their own experience, and so is mine too. Thus far I got one small swarm in a Dadant hive. But this plan has several drawbacks. What if the bees don't swarm, or swarm too late to form a strong colony before autumn? Further, it implies a great loss of time and work from bees and bee-keeper. Finally, what to do with the old stocks weakened by swarming.

The third plan is to take artificial swarms, brushing the bees from the straw-hive frames into the new hives, and divide the old combs between the other straw-hive colonies. I did this with two colonies with good result. But what to do with the combs if the straw hives are full? The fourth plan is yours, viz., to pose the straw hives on top of wooden ones, and let the bees work themselves down. This would be indeed the best plan if the bees agreed to work down. But they obstinately refuse to work in the large wooden hives, and even seem inclined to swarm. I have arranged four hives in that way in the beginning of May with the same negative result, though I took the strongest colonies which were full to the bottom. There seems to be no chance to get my bees transferred this summer in this way.

There is a fifth plan, which I intend to try next, *i.e.*, to drive the bees down and put excluder between. But then there seems danger to ensue for the queen according to the "Guide-Book." Yet I must try something.—F. VAN EEDEN, *Walden, Bussum, Holland.*

ANONYMOUS DONORS.

AN ACKNOWLEDGMENT.

[4843.] I shall be thankful if you will allow me to say in your columns that I have received another donation to the Kent and Sussex B.K.A. Palace Show Prize Fund without any name, initial, or clue to the sender, save that the 10s. Postal Order has the stamp of High-street, Sevenoaks, office, and is dated July 8. Should this meet the eye of the donor, let him (or her) be assured that we are greatly obliged for the gift.—E. D. TILL, *Eynsford, Kent, July* 21.

DEALING WITH FOUL BROOD.

[4844.] Your "wire" of to-day duly to hand. I would thank you for promptitude in reply. Very sorry indeed to have your verdict, but feared it was a case of foul brood. This is the first I have heard of the disease in this neighbourhood, and do not know the source. I am making strenuous efforts to rouse the bee-keepers of this district to an intelligent interest in modern bee-keeping, and this case was discovered upon one of these expeditions. It is, however, very discouraging to a beginner, coupled with such a season as the present. The stock in question is now destroyed; bees, quilts, frames, and combs, and the hive fumigated. The other stocks will be fed on medicated syrup, unless I discover further cases of similar character. This does not seem to me to be of the most virulent type of "F.B."—L. S. C., *June* 16.

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

Mr. Ford, whose apiary appears below, is, as stated, a reader who makes the business side of bee-keeping an important part of his work. He not only sells honey, but stocks and swarms of bees. This being so, we are very pleased to see him laying such special stress on the point of "cleanliness," by which is evidently meant care for the bees with regard to keeping them free from disease. This is so important a matter for all "dealers" who are intent on giving satisfaction to customers that we hope all will follow the same lines. For the rest, we leave Mr. Ford to tell his own story as follows:—

"In sending the enclosed photograph of my apiary, you will probably notice one thing, and that I boast of—viz., cleanliness. A thoroughly clean hive inside and out is essential for the well-being of the bees and storing of honey. This, I believe, is a good step towards the prevention of disease, and the next in importance is strong stocks. These I get by uniting two, or even three, weak lots together. At the time the photo. was taken I had seventeen frame hives and two skep hives, and up to the time of writing (June 1) I have had but one swarm, though I expect a few more daily. I am only a bee-keeper of but eight years' or so experience, but I have studied very closely the ways, &c., of these little workers of ours. My sales to date have been very fair—viz., four stocks and twelve hives. I do not say this boastingly, but simply for the interest of would-be bee-keepers, in order to show that there is a good bit of profit to be made by keeping a few stocks of bees under good management. The motto on my show-cards is, 'Nothing without Labour,' and I think it is very applicable to most trades, but more especially bee-keeping. My hives stand on a small plot of ground, an awkward-shaped corner of a meadow about 200 yards from the buildings, and are thus in a bad position for photographing because of being so close together. I vary the pattern of hive and aspect, some facing anything between south and west. The old brooms seen inverted in the picture answer two purposes — first, as a 'landmark'; second, as a swarm-catcher or clustering-place for swarms when they issue. You can see a small part of the bees' drinking fountain on left-hand of photo, which consists of an old tin milk pan with some rough matting—as used by gardeners for packing, &c.—placed in pan; this provides a resting place for the bees, enabling them to get water from a leaking tap falling on a board into the pan. May I also say a word about my little four-and-a-half-year-old boy seen helping me to spread the brood in a hive? He is holding one frame and the smoker while I am examining the other frames. This bee-man is not in the least nervous, and that is the main point, but he has been fond of bees since he could toddle. The other object is your humble servant, the writer hereof."

MR. ARTHUR E. FORD'S APIARY, HEMEL HEMPSTEAD, HERTS.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Rucher Belge.—Pliny tells us that a Roman Senator had a hive made of the most transparent horn, in order to observe the bees at their work.

There appears to be no notice of the use of observatory hives in any writings of the Middle Ages. About 1680, Swammerdam might have made interesting discoveries had he known of such a possibility. That he did not is proved by his suggesting to put "panes" of paper in the hives, and when the bees had worked a certain time to tear them away and observe their work. He seems not to have known that the bees would not have waited for him to tear away the paper! At this time the hives used were simply basket hives, quite useless for purposes of observation. Réaumur was more fortunate in being able to use glazed hives in his studies on the hymenoptera. Some of his hives were in shape like a pyramid, so made because (as he said) the bees commence building at the top; they seek warmth, and concentrate in the top part where they find a space they can entirely fill up.

Huber invented a hive to open like the leaves of a book, but this kind of hive did not answer in winter, as the bees could not be kept sufficiently warm. The manufacture of hives with windows has provided the means of making observations with the greatest precision, and an intelligent apiculturist can now verify in the course of a single season the observations previously made during 2,000 years. We advise our young bee-keepers to read for themselves the works of Réaumur and Huber.

Deutsche Bienenzucht.—Purchasers of honey often object to its colour, quite wrongly. Honey from the same hive changes colour in the course of the season. The honey from white clover is light in colour. Later on, in July, bees work on other flowers, and the honey becomes darker in colour. It, however, gains rather than loses in bouquet and flavour.

Bienenwertschaftliches Centralblatt.—On the island of Fehmaen, Schleswig-Holstein, red clover is the chief bee-pasture. Carniolan bees were introduced at first as an experiment, and it has been proved that the second cut of the red clover yields them a rich harvest. The most favourably situated colonies in the island with Carniolan bees realised from 102 lb. to 123 lb. of honey per hive; while a neighbour with the ordinary black bee only had an average of 20 lb. per hive, another about 33 lb. Therefore, the conclusion established is that for the working of red clover there is no bee so useful as the Carniolan.

Native Bees in Africa; an interesting Extract.—M. Decle, in his most interesting work, "Three Years in Savage Africa," gives a lively description of an attack by bees while he was travelling between Lakes Tanganika and Victoria Nyanza in Central Africa. He says:—

"We entered the little village where I meant to camp, and while I was having some food I saw some of my men leaping out of one of the huts, and close behind them came an army of bees. Everyone rushed into the huts, some of the more daring men tried to save the goats and fowls, which were attacked by the furious enemy. All that were not brought in fled on every side, simply mad with pain from the bee stings. One of my donkeys broke his tether and dashed through the village at a furious gallop, then burst through the outer enclosure and escaped into the open country. My other two donkeys, whose ropes were too strong for them, rolled on the ground and howled. I had followed the example of the natives and dashed into one of the huts, but when I saw this I wrapped myself in blankets, and, waving a torch of burning straw, hastened to the rescue. I managed to get the donkeys loose and had them led out of the village. I have before seen a herd of oxen in terror of lions, but never have I seen so many creatures in such mad panic as I saw on that day from the bees, and they had good reason. Instead of flying in a compact swarm, the bees darted with the rapidity of lightning to every part of the village, no one could venture from the huts without half a dozen literally fastening themselves upon him. If a door was so much as left ajar the bees darted at the opening, only in the darkest corner could one escape their attacks. In spite of their numbers there was no humming, only a silent, grim, pitiless onslaught.

"I soon discovered what had provoked this fierce attack. The natives of this district are great bee-keepers. Outside each village a few trees which manage to grow in the miserable sandy soil are covered with artificial hives—old gourds with a hole bored through them, pots upside down, old boxes made of bark, or any other thing that comes handy.

"Besides this, they put in the darkest corner of their huts short poles smeared with honey, and on these the bees alight and build their combs. Almost every hut has thus its open hive. You can go near and watch the bees at work. They are quite harmless if undisturbed. But it appeared that one of my men had gone into a hut and carelessly lit a fire near one of these nests. The disturbed bees rushed at him in a body, being joined by others, and the scene I have described was the result."

Queries and Replies.

[2928.] *Transferring from Skeps to Frame Hives.*—Will you kindly answer the two following questions in the B.B.J.:—1. I have

four old stocks of bees in skeps, and wish to transfer them to frame-hives; but being only a novice in bee-management, I ask: 1. When would be the best time to transfer, should it be done at once in order to let the bees get well established in their new home by wintering time, or wait till September, or when? 2. In transferring, would they transfer themselves at *this* season in accordance with the method advised of late in B.J., or should I drive them? I may say two of the four are weak, and have been doing very little in the way of work during this season. I gave a super to each on May 9; one lot a fortnight afterwards began working in the super and then left it, and I had a swarm from that hive; none of the others have taken to the super at all, and yet the bees seem to be active, as far as I am able to judge.—H. L., *Bexley Heath, July* 19.

Reply.—1. If it is intended to transfer the old combs from the skeps to the new hives, the present time would be suitable; but we strongly urge you not to transfer the old combs at all. It is no easy task for a beginner to perform the operation, and it makes a poor job, even when done by a competent hand, compared with new, clean, straight combs to furnish the frame-hives with. We should winter the bees where they now are unless you can purchase half-a-dozen clean, ready-built standard frames of comb for each hive, in which case the bees might be driven from the skeps and run into the hives so fitted as soon as the breeding season is over—or, say, at end of August. 2. No; there will be no chance of bees in skeps transferring themselves to a frame-hive placed below at this late season; and to drive them from their combs containing brood would entail the loss of some thousands of young bees, now hatching out, thus weakening the hive for future work. Your mention of weak stocks that "have done very little work this season" makes us advise an inspection of the latter, to ascertain, if possible, the cause of weakness. They may be diseased, and, if so, all labour spent on them is worse than wasted.

[2929.] *Slightly Diseased Hives and Surplus-chambers.*—About a month ago, the expert from the Northumberland and Durham B.K.A. paid us a visit to inspect our hives (about fifty in all) and found foul brood in several. I have two hives, and in one of them about three or four cells were affected in two frames. He told me I had better take these frames out and feed the bees on medicated syrup. But as honey had just started to come in, the bees refused to take the food offered, and sections were at once put on the hive. A month later (July 15), there are three racks of sections on the hive, two of which racks are about finished, and on removing them to examine the brood-frames to-day we find about twelve cells affected in five frames Do you consider it will tend to effect a cure by repeating these examinations and removing frame after frame each time as we find them affected; or if not advisable to go on removing frames in this way, what is the best thing to do?—R. H., *West Hartlepool, July* 16.

Reply.—We should leave brood-nests undisturbed till the close of the honey season. Then, after removal of all surplus, examine each frame, and take away every one that contained larvæ affected with the disease. By that time breeding for the year would be about ended, and combs will be available for medicated food given as winter stores. In advising as above, we take for granted that the outbreak of disease a recent one, and that there are no affected cells left in the hive which contain foul brood of old standing, *i.e.*, those in which the contents have reached the spore stage.

[2930.] *Ants in Hives.*—As you are always willing to oblige bee-keepers in their difficulties, I ask your advice. When my hives go to the moors about the end of July, I always find that a great number of black ants get into the roofs and space between section-racks and lifts, also between the quilts; sometimes the hives are almost black with them. Can anything be done to prevent this mischief, or tend to check the ants from getting in, or is there any trap that could be used? The distance to moors is about fourteen miles, and I am unable to see the hives sometimes for a week or ten days at a time. I have never found ants in any part of the hives to which bees have access, although frequently there is—in addition to the mature insects—embryo also on the quilts. In this district the honey harvest is fully a month later than last year, and will hardly be up to the average. F.B. is quite unknown here. I enclose name, &c., and sign myself—B. Hive, *Bedale, Yorks.*

Reply.—Some bee-keepers set the hive-legs in lids from used coffee tins, and pour oil or paraffin into the lids. This is fairly effective, but the iron "cup" device for screwing on bottom of hive-legs (sold by Messrs. Jas. Lee & Son) is the most effectual cure we know of for preventing the mischief referred to.

[2931.] *A Beginner's Queries.*—I have three hives of bees, two of which are very strong and active, the third is less strong. I have taken one rack of sections from each of the two stronger ones, and one of these two has nearly completed a third rack, whereas the weaker of the three has not yet filled one rack. I, therefore, ask:—1. Should I give more sections for filling after removing those now on? 2. The bees have occupied their present hives for three or four years, and during that time have never been opened or examined except to take off the surplus honey. Would you advise me to have them examined by an experienced bee-keeper or allow them to continue as they are? They seem quite healthy, judging from their activity. 3. The bees are, as a rule, very vicious, consequently I am, more or less, afraid

to touch the brood-frames, which seem to be sealed fast to the hive. Can you say why the bees pursue and sting persons who may be nearly 100 yards away from the hives at the time? I observe the bees ejecting the drones out of the hives for past week. I am sure there are 100 dead drones outside one hive. What does that indicate? Is the honey season drawing to a close? The white clover is plenty yet, as the fields about are pasture land, and there are no other bees in the immediate neighbourhood. I presume they have plenty of scope to gather honey yet. None of my hives swarmed this year. Is that a sign of a failing queen? A number of people who have had bees for years are giving them up, as they cannot get sale for the honey, and consider bee-keeping to be a bother. Therefore I cannot get anyone to instruct me in their management. I saw a novel way of taking surplus honey the other day. The bees were in a straw skep which was cemented outside to protect it from the weather. The skep was placed over a box resembling the bar-frame portion of a hive, with frames and comb inside. In the lid of box there was a hole cut, and excluding-zinc placed over it, and the skep put over the hole, so that when the bees had the box full you just lifted the lid off with skep on top, and withdrew the box and honey. The owner told me he got 50 and 60 lb. of honey in the box at a time, if the season was good, and he had no expense in purchasing a hive. Would you approve of this method of bee-keeping from an economical standpoint?—A. W. H., *Kilkenny, July* 15.

REPLY.—1. Unless the bee-forage in your district includes a good breadth of heather it is useless giving the bees more sections to fill after mid-July. 2. If the bees have prospered, and are prospering, on the let-alone principle, we should let them continue as they are. You may "go further and fare worse," as the proverb says. Hence our withholding advice. 3. If the bees are naturally vicious when left alone, they may become more so if manipulated, this being another reason for avoiding disturbance. 4. It points to a speedy end to honey gathering for the year, also to all idea of swarming being given up by the bees till next year. 5. No; but your friend is quite at liberty to uphold his view, though contrary to ours.

[2932.] *Feeding Swarms in Skeps.*—Will you be good enough to advise me on the following?—On Tuesday last I hived a good swarm in a new skep. The season is late for such work, and the bees cannot, I feel sure, obtain sufficient stores to winter. I, therefore, am anxious to feed them to enable them to do this, but do not want *to cut out the crown of the skep*. The reason I am keeping them thus is for stock purposes. In your extensive experience can you tell me of a method of feeding them without cutting the skep, and in such a manner as to prevent robbing? I have the "Guide Book" and "Simmins' Bee-farm," but neither touch on this point.—D., *Ashby-de-la-Zouch, July* 20 (twenty years a subscriber to the B.B.J.).

REPLY.—By fitting the rim of an American cheesebox lid (to be had for a copper or two) on lower edge of skep to raise it up a couple of inches, the bees may be fed from a plate laid on floor-board. Pour the syrup in latter with some sliced corks laid in the food for the bees to stand on. Keep a look-out that stranger bees don't start "robbing," *i.e.*, carrying off the food.

[2933. *Bees Transferring Themselves.*—Having followed the directions given on page 140 of "Guide Book," I have been allowing four skeps of bees to transfer themselves into a frame-hive. But owing to bad weather, I find that they will need all their stores to bring them through the winter. If I was to place skep below frame-hive, and allow them to winter in that way, would I be likely to get it off empty early in spring? Your answer will oblige.—J. McG., *Galston, July* 17.

REPLY.—We should leave the skeps on all winter, as being the safest course to follow with regard to preserving the stocks alive.

Bee Shows to Come.

July 26, at Buttfield Park, Hessle, East Yorks.—Honey Show in connection with the Hessle and District Horticultural Society. Good prizes for Honey-Trophy, Sections, and Extracted Honey. Schedules from Ernest C. S. Stow, hon. sec., Thornton House, Hessle, East Yorks.

July 30 to August 1, at Leeds.—Honey show in connection with the annual show of the Yorkshire Agricultural Society, at Roundhay Park. £2,115 in prizes, including liberal cash prizes for honey. **Entries closed.**

July 30, at Henbury, near Bristol.—Honey show of the Henbury and District B.K.A., in connection with the Henbury Horticultural Society's Exhibition. Seven open classes for honey and beeswax, including classes for single 1-lb. section and for single 1-lb. jar of honey (with free entry); prizes, 10s., 7s., and 3s. in each class. Schedules from W. G. Bamfield, hon. sec. Henbury and District B.K.A., Cribb's Causeway, near Bristol. **Entries close July 23.**

August 2, at Helsley, Cheshire.—Flower show and athletic sports. Three classes for Honey and Wax open to all bee-keepers in Cheshire. C.B.K.A. medal for best exhibit by member. Schedules from Dr. Briant, Helsley, Warrington. **Entries close July 26.**

August 4, at Lichfield (Bank Holiday).—Honey show in connection with the Lichfield Floral and Horticultural Society. Open classes for Sections and Extracted Honey. Five prizes each class, 20s., 15s., 10s., 5s., 2s. 6d. Schedules from F. J. Hall, hon. secretary, City Station Wharf, Lichfield. **Entries clese July 28.**

August 4, in the Walled Meadow, Andover.—Honey Show in connection with the Andover and District Horticultural Society. Class for single 1-lb. jar of extracted honey (with no entry fee). Also classes for sections, extracted honey (light and dark), bell glasses, honeycomb designs, and beeswax. Schedules from the Hon. Sec., Dr. Gillett, Elvin House, Andover. **Entries close July 28.**

August 4, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Exhibition of the St. Thomas Cottage Garden Society. Eleven open classes. Schedules from E. E. Scholefield, Hon. Sec. Devon B.K.A., Heathfield, Chudleigh, S. Devon. **Entries close July 28.**

August 4, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Four open classes, including one for single 1-lb. Jar of Honey and one for 1-lb. Section. Schedules from C. J. Cooke, Hon. Sec., Edgefield, Melton Constable. **Entries close July 26.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22 Leam-street, Leamington. **Entries close July 31.**

August 6, at Neston Park, Wilts.—Honey show in connection with the Atworth and District Horticultural Society. Fourteen classes for Honey and Bees, including classes for single 1-lb. section and single 1-lb. jar, with free entry. Schedules from J. P. Inkpen, Secretary, Neston, Corsham. **Entries close July 30.**

August 6, at Clutton, Bristol.—Honey Show of the Bristol B.K.A., in connection with the Clutton and District Flower Show. Liberal prizes. Six open classes for honey and bee-appliances, including classes for single 1-lb. section and single 1-lb. jar extracted honey (entry free). Schedules from Jas. Brown, hon. sec., 31, Bridge-street, Bristol. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, in the Grounds of Hardenhinch Park.—Honey show in connection with the Chippenham & District Horticultural Society. Twelve classes for Honey and Bees, including **open classes** for single 1-lb. section and single 1-lb. jar (with no entry fee). Schedules from W. Small, Secretary, Market-place, Chippenham, Wilts.

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13, at Radstock, Bath.—Honey show in connection with the annual show of the Radstock and District Horticultural and Fanciers' Association. Schedules from the Secretary, B. M. Clark, 1, Fox Hills, Radstock, Bath.

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 13 and 14, at Dudley.—Annual show of the Worcestershire B.K.A. in connection with the Dudley Horticultural Society. Schedules from A. R. Moreton, Leigh, Worcester, show secretary. **Entries close August 6.**

August 16, at Ammanford (S. Wales).—Honey Show in connection with the Ammanford Flower Show. Judge appointed by the B.B.K.A. Liberal prizes for single 1-lb. section and single 1-lb. jar extracted honey, also classes for three sections and three 1-lb. jars light and dark honey. One local class. Particulars from Mr. Ivor Morris, Hon. Secretary, Ammanford, R.S.O. **Entries close August 12.**

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fête in "The Quarry." Bees, Honey, Hives, and Appliances. Thirteen Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Barnton, Northwich.—Honey Show in connection with the Flower Show. Honey department—Seven local classes and one class (open to all Cheshire) for twelve 1-lb. jars "light" honey. The Cheshire B.K.A. bronze medal goes to the winner of first prize in this class. Schedules from Mr. S. Wade, Hon. Sec., Barnton, Northwich. **Entries close August 16.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 26, at Cartmel, Lancs.—Honey show in connection with the annual show of the Cartmel Agricultural Society. Open classes for Six Sections and for Six 1-lb. Jars Extracted Honey; also for beeswax in cakes for domestic use. Special prizes for members of the Lancashire B.K.A. and for county bee-keepers. Schedules from Wm. Cragg, secretary, Cartmel. **Entries close August 16.**

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 27 and 28, at Uttoxeter.—Bee and Honey Show in connection with the Annual Show of the Staffordshire Agricultural Society. Fifteen classes for bees, honey, and appliances. Open classes for 12 1-lb. sections, 24 1-lb. jars, and 12 1-lb. jars extracted honey respectively. Schedules from Rev. G. C. Bruton, Hon. Sec. Staffs. B.K.A., Great Haywood Vicarage, Stafford. **Entries close August 2.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules ready shortly, from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** *Pollen Clogged Combs.*—Referring to the letter of Mr. D. Vallance on the difficulty of removing pollen from combs (4,806, page 246), we received from Mr. Vallance a frame of comb in which the centre portion of which he rightly describes as being "pretty well clogged with pollen" on both sides. This comb after infection we marked and returned—as requested by sender—for cleaning, and a couple of days later the same comb was received from Scotland perfectly free from pollen. A result which we consider very satisfactory. The only qualification needed so far as justifying our view that "old pollen-clogged combs had best be burnt as not worth spending time on" is that we had in mind far worse specimens than the sample referred to *i.e.*, with combs *full up* with old, hard pollen. The pollen in comb inspected was apparently of this year's gathering, and the cells had only been once bred in and was moreover a nice straight (wired in) comb, just such a one as we should make an effort to preserve for future use; otherwise the "cleaning out" was a complete success.—[EDS.]

L. ROYDEN (Liverpool).—*Syrup for Use when Uniting Bees.*—Any kind of sugar may be used for making syrup intended for use in "uniting" bees. Such syrup is made with double the quantity of water compared with that for bee-food. In fact, is little more than well sweetened water, so thin as to be sprinkled on with a spray diffuser. Bear in mind also that common flour, sprinkled over the bees from a dredger, is as effective as syrup if properly used.

A. A. BLAIR (Midlothian).—*Liability of Railway Companies for Damage to Bees.*—1. Railway companies are only "responsible" for damage to a stock of bees in straw skep caused by the negligence of their own employees. Moreover, the consignee should refuse to accept delivery when goods arrive in damaged condition; and, if you overlooked this point, we fear you will have difficulty in getting compensation for damage. 2. The same rule applies to the second skep, in which the bees were found to be suffocated on arrival. In this case it may have been bad or improper packing that caused the mishap, so that the County Court Judge before whom the claim for compensation came, if contested, would decide where the blame lay after hearing the evidence *pro* and *con*.

J. HEWITT (Bedworth).—*Preparing Honey for Showing.*—There is no book or pamphlet that we know of specially dealing with this subject. With regard to glazing sections, if you refer to prepaid advertisements, in any issue of B.J. for March or April last, it will show Mr. Woodley's offer to supply a sample glazed section to work from.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

(CANON) R. M. BERESFORD (Instioge).—The dead larvæ sent are simply chilled-brood in the pupa stage cast out after death by the bees. We cannot judge as regards disease from samples of either dead brood or bees when so cast out. It would involve altogether too much time and labour by way of microscopic research to make a post-mortem from such material.

P. C. (Grantown).—Foul brood developing fast.

"NOVICE" (Annfield Plain, co. Durham).—Sample of comb (smashed quite flat in post) is utterly unfit for judging whether affected with foul brood or not. Refer to printed clause in this column giving directions regarding "suspected combs."

J. CHAPMAN (Belfast).—*Honey Samples.*—Honey moderately good. Is from mixed sources, possessing no special flavour that enables us to define the source from whence it was gathered.

D. P. (Scarboro').—We find foul brood in both samples, though neither shows anything to indicate that the disease is of long standing or of virulent type.

*** *Several answers are unavoidably held over.*

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Editorial, Notices, &c.

LINCOLNSHIRE B.K.A.

ANNUAL SHOW.

This annual show was held in connection with the Lincolnshire Agricultural Society at Boston on Thursday and Friday, July 17 and 18, and was favoured by beautiful weather. The attendance on the second day was a record one for the society, the honey department being crowded the whole day. Dr. P. Sharp conducted an examination for the 3rd class certificate when two candidates came forward. Mr. W. M. Herrod lectured in the bell-tent to very large and appreciative audiences, several new members of the L.B.K.A. being enrolled. Dr. Carline (Lincoln), and Dr. P. Sharp (Brant Broughton), acted as judges, and made the following awards —

OPEN CLASSES.

Collection of Hives and Appliances.—1st, W. P. Meadows, Syston, Leicester; 2nd, E. H. Taylor, Welwyn, Herts; 3rd, R. H. Coltman, Burton-on-Trent, Staffs.

Complete Hive for General Use (*Price not exceeding* 25s.).—1st, R. H. Coltman; 2nd, E. H. Taylor; 3rd, W. R. Garner, Dyke, Bourne, Lincs.

Complete Hive (*Price not exceeding* 12s. 6d.).—1st, W. R. Garner; 2nd, R. H. Coltman; 3rd, E. H. Taylor.

Honey Trophy.—1st and British B.K.A. Silver Medal, D. Seamer, Grimsby; 2nd and B.B.K.A. Bronze Medal, F. Harris, Sibsey.

Twelve 1-*lb. Sections.*—1st, A. W. Weatherhogg, Willoughton, Lincoln; 2nd, R. Allen, Trusmore, Bicester; 3rd, H. Goodsell, Biddenham, Kent; 4th, W. Hatliff, Thoresway, Lincs.

Twelve 1-*lb. Jars Extracted Honey.*—1st, T. Blake, Broughton, Hants; 2nd, A. W. Weatherhogg; 3rd, T. S. Holdsworth, Kirton-in-Lindsey; 4th, W. Hatliff.

COUNTY ONLY.

Twelve 1-*lb. Sections.*—1, A. W. Weatherhogg; 2nd, W. Hatliff; 3rd, H. Pears, Mere, Lincoln; 4th, D. Seamer.

Twelve 1-*lb. Jars Extracted Honey* (*Light*).—1st and L.B.K.A. Silver Medal, F. W. Frusher, Crowland; 2nd, A. W. Weatherhogg; 3rd, H. Roughton, Holbeach; 4th, Rev. H. F. Goffe, Thoresway.

Twelve 1-*lb. Jars Extracted Honey* (*other than Light*).—1st, F. W. Frusher; 2nd, W. Patchett, Cabourne.

Twelve 1-*lb. Jars Extracted Honey* (*Novices*).—1st, Mr. Geo. T. Pilkington, Branswell; 2nd, H. Roughton; 3rd, F. W. Spratling, Haconby.

Twelve 1-*lb. Jars Granulated Honey* (*open*).—1st, Rev. H. F. Goffe; 2nd, F. S. Smith, Louth; 3rd, J. R. Frankish, Grasby; v.h.c., D. Seamer.

Beeswax (*open class*).—1st, Jno. Berry, Llanrwst; 2nd, R. Dutton, Yerling, Essex.

Observatory Hive with Bees and Queen.—1st, R. Godson, Yothill, Lincs; 2nd, B. C. Blackburn, Billinghay, Lincs.; 3rd, D. Seamer.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of June, 1902, was £4,294.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

****** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

INSECTIVOROUS PLANTS.

[4845.] I was interested with the note in "Comments on Current Topics" (page 273 of your last issue) on insectivorous plants, as I have known these curious anomalies of the vegetable world for some time. Early in the spring this year I brought some Drosera plants from the New Forest and tried to grow them in captivity. My method was to take a soup plate or shallow receptacle, and fill it with washed cinders or coke, heaping it up in the centre. This was then covered with a layer of moss, on which the Drosera were placed. The whole is then kept saturated with, preferably, rain water which contains nitrogen in one or two forms the water, if necessary, being changed two or three times a week. Under this treatment the plants flourish, as it simulates their native environment. This spring I started bee-keeping, and one day was surprised to see a score of bees on my Drosera plants. Not only were they attracted by the water to quench their thirst, but also were imbibing the glairy saccharine fluid secreted by the tentacles. I thought this observation might be of interest to some of your readers. On moors and heaths, where these plants are abundant, they may be a

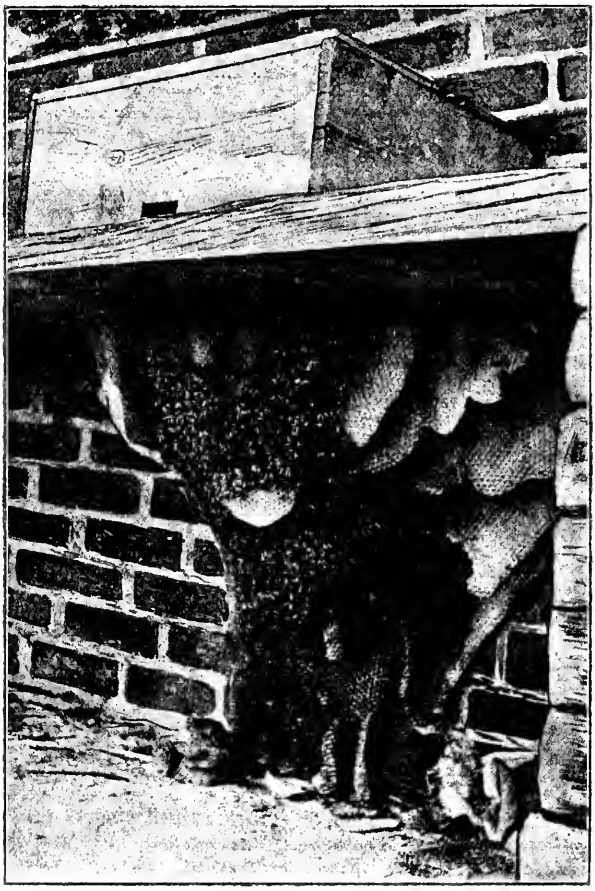
source of bee-food. The bees are too heavy and strong to be captured by the inclosing tentacles. The above also, in my opinion, is not a bad way of providing bees with water, as the moss covering prevents the rapid evaporation attended by other methods.—C. T. J., *Miskin-road, Dartford.*

BEES BUILDING IN THE OPEN.

[4846.] I enclose a photo. which I think will interest your readers, as bearing on the question often discussed of winter quarters.

We pack up our bees with every care as winter approaches, and yet here is a stock which passed last winter without any shelter whatever beyond the shelf from which the combs are hung, and the two side walls of the little old-fashioned bee-shed projecting just far enough to break the force of the wind.

The photograph shows them exactly as I saw them at the beginning of last April, and I was assured by their owner that they had remained so throughout the winter, though at one time there was a foot of snow on the ground.



BEES BUILDING COMBS IN THE OPEN.

It will be seen that their combs cover nine courses of brickwork, and therefore hang to a depth of 31½ in. I need hardly explain that the stock was placed on the shelf in the box-hive shown, and worked their way down through a hole in the wood of shelf.

The bee-shed in question is in the garden of Bitterly Court, Ludlow, the residence of Mr. J. V. Wheeler.—J. B. Hewitt, *Worcester.*

FEEDING SWARMS IN SKEPS.

[4847.] The inquiry under the above heading (2,932, page 298) led me to think it worth while to send an account of a simple plan I have had in use for a number of years, and which has proved very efficient for the purpose.

It is an underfeeding arrangement, and the "material" required is, first, a fairly sound box, large enough to form a floor for skep. Cut away half of one end (this end to be always at the back of skep), and then closely board over the top to form a floor, and cut a "feed-hole," not in centre, but rather to the right. Fix a shelf under feed-hole on which the "feeder" is to rest; the latter should be made so as to slide in on the shelf easily, and, when in position, one side of feeder should be exactly under feed-hole, to allow bees to pass up and down freely. Four small wedges will be necessary to wedge feeder tightly to floor to prevent robbing. The feeder may be made of a chocolate cream box, well pitched at joints (a baking-tin with perpendicular sides will do). A wood "float" is used in either case, cut from one piece of board and to fit very loosely inside of feeder.

A "Fry's chocolate cream" box will hold about 6 lb. of syrup, and such an arrangement, when once fitted up, will last a lifetime, and ten skeps in one season may be fed to necessary weight by its use.—Owen Browning, *Kingsomborne, Hants.*

RAILWAY CHARGES FOR HONEY.

[4848.] In reply to the letter in B.B.J. of July 10 (4825, p. 274) I beg to enclose tariff of charges for conveyance of farm and dairy produce (including honey) from the Great Western Railway Company's "Guide." I believe most, if not all, of the railway companies in this district run goods (at owner's risk) at the same terms, so that you see 24 lb. will go 200 miles for 1s. Referring to honey season, we now have white clover in profusion about this district; limes just breaking bud, and bees fairly "romping honey in." Every prospect of a good season.—F. EVANS, *Market Drayton, July* 16.

DEALING WITH VICIOUS BEES.

[4849.] I am particularly interested in the answer which you give to a correspondent (2,902, page 265) in B.J. of July 3. I started bee-keeping in 1897 with Carniolans and for two years they were very quiet. I could sit close to the hives and watch the bees. But since then they have become very bad-tempered and attack people even twenty yards away. I put this down to their becoming crossed with the neighbour's black bees, though they still keep their markings and their propensity for swarming. So much so that, if it were not for the difficulty of finding the old queens, I should requeen with the common bee and so get rid of hybrids. Do you think I am wrong in my theory?—E. C., *Newton Abbot.*

[It is a well-known fact that the mildest-tempered bees, when of the pure race, suddenly become very vicious when hybridised, so that there is no safe way of restoring former gentleness but by introducing a pure Carniolan queen. We never heard of pure Carniolan bees turning vicious if not hybridised.]

BEE VENOM.

[4850.] Mr. R. Hamlyn-Harris's note (4841, page 294) calls for a word from me, although this may anticipate my full paper on the subject. I believe it likely that the poison of bee venom is identical with, or related to, the perfume or scent constituent of the venom, and I am anxious to know if any investigations on the influence of amyl salts (? nitrite), as an excitant to bees, have preceded my own now proceeding.—LESLIE PHILLIPS, M.D., *Leamington Spa, July* 25.

POLLEN-CLOGGED COMBS.

[4851.] Many thanks for your opinion of the cleaning of the pollenised comb. My object in sending you a *new delicate* comb of last year's build was chiefly to show that such a one could be cleaned *without injury.* During the last five years I have experimented with all sorts of comb—frames (wired and unwired), combs transferred to frames and unwired, combs without frames at all, taken from skeps or vagrant swarms, and virgin comb, combs of all ages—and the result was always the same, no injury to the comb. No great care is necessary in handling such a comb as you describe; old, full-pollened cells, hardened with age, yield just as readily as the one I sent. The cells that present any difficulty are those in which pollen and honey have become candied and present the appearance and texture of "toffee." These, however, are always, so far as my present experience goes, a very small fraction of the cells requiring cleaning. The cells were counted before the comb was despatched, and numbered fully 1,000, but the same operation would have practically cleaned the whole comb in *the same* time.—D. V., *Dunaskin, July* 26.

TRANSFERRING FROM SKEPS.

[4852.] A month or so ago I took two swarms of bees in skeps to a friend who wanted to start bee-keeping. I found he had not got any hives, so put the skeps down on boards where he intended to have his hives. He has now got hives, and they are fitted ready for the bees. The skeps are full of comb and overflowing with bees; but the hay is nearly all cut, and the honey flow is practically over. 1. Should he transfer now by lifting the skeps on top of the frame-hives and packing in the usual way, or should he let the bees winter in the skeps and transfer in spring?—G. H. BRUCE.

DO ROBBER-BEES STING?

In an editorial under the heading, "Do Robber-Bees Sting?" a suspicion is ventured that robbers do not sting the defenders of the hive they are trying to rob. Moreover, the Editor asks for something positive upon the subject, and here it is:—Robber-bees do sting at such times, and with terrible effect, too. If this were not so, how is it they are so successful in overrunning at times a good, normal colony? Surely the bees of the attacked colony are not intimidated by any superior force of numbers, and retreat before the robbers in their rush for the stores? This is not in the nature of the honey-bee when she feels that her home is worth fighting for. When such a colony submits to the plundering of its combs, you may know that its fighting force has been swept away by the fierce onslaughts of those frenzied desperadoes?

There is something peculiar about the apparent ease with which robber-bees will, in so many cases, get the better of a bee that opposes it in an endeavour to enter the hive. The robber is worked up to the very highest pitch of excitement and abandonment to an

evil habit; the poison-glands pour forth their fiery fluids more bountifully; and, the honey-sac being almost perfectly in a state of depletion, it will be seen that she is in the very best possible fighting condition. But a robber-bee will not use its sting for the mere pleasure of killing—that characterises a villain in human form. There is a risk to run which she is not willing to take in any such way. I mean the risk of losing her sting. The danger of having it torn away is not so great when thrust into the body of another bee; but when the sting has penetrated sufficiently to kill outright, the bee cannot withdraw it easily, and I have often seen them crawling about upon the ground in front of the hive dragging the dead bee thereby.

Robbers will often bite and sting just a little a bee that has surrendered, in an effort to make her give up the last mite of honey, which may cause the bee to die in a short time. This, to me, is more plausible than that the captives, so to speak, join the victors in their own hive. When a robber has been seized by a fighting bee, and the two are buzzing so rapidly on the alighting-board or ground in front of the hive that the eye cannot determine what is actually being done at the time, the fact that one, and quite often both, of them have their mandibles fastened upon each other at the close convinces me that both were fighting. Sometimes they cease buzzing, and wrestle on the ground for the advantage. The mandibles hold a death-grip, while the two hindmost legs of each are dexterously used in an effort to prevent the other from getting into position to use its sting. The bee whose abdomen is distended the least of the two that are fighting usually succeeds in this and destroys the other. So soon as the fatal thrust of the sting has been effected, the victorious bee will usually make an effort to break away; but the other will often cling by the mandibles till she is too weak to do this.

As the editorial in question suggests, evidence of a very conclusive nature may be had in cases where the contention is between a colony of Italian and black bees. The untrained eye then can easily separate the robbers from the regular inmates of the hive. But the experienced observer will not often be deceived by the manœuvres of robber-bees. The sweet melody in the hum of a bee engaged in honest pursuits is so different from the loud, shrill notes of robbers that the ear alone may detect them. The bright, cheery colour of honesty is soon swept away, being replaced by a dirty, glassy, greased appearance in a short time, when a bee resigns itself to this evil habit. All Italian bees will, when they become aged, assume a darker colour than they had when in younger life; but this shade of blackness that comes with waning vitality—vitality spent in honest toil—contrasts largely with the other, though the novice may be wholly unable to determine a robber by its colour.

Upon approaching a hive—and I might say any hive, even its own—a robber-bee will hover over the entrance, just out of the reach of the guards, very much as a sparrow-hawk will flutter above a certain spot in some grassy, weedy field when watching for a mouse.

There is anything but pleasantness in an apiary where the bees have acquired the habit of robbing. On behalf of the little honey-bee, and the good graces of every reader of this journal who has the care of bees, I beseech you to use great care not to provoke them to rob. Their mission is a noble one, and they should not be tempted to pursue an ignoble one through the careless exposure of sweets.

I would be pleased to hear from others upon the subject of robber-bees.—W. W. M'NEAL in *American Bee Journal*.

Queries and Replies.

[2334.] *Superfluous Queen-cells.*—On June 21 last I hived a swarm at the rectory near here, where I attend to the bees, and after cutting out ten queen-cells, returned the swarm to the parent hive. On July 5 the same hive swarmed again, and when examined I found no less than thirty-seven queen-cells, most of them containing a full-grown queen. I killed about twenty-five of them, the rest escaping and getting mixed up with the bees or taking wing, and so being lost. The queens in question were reared in what looked like enlarged drone-cells with just a curve downwards. They were nearly all small queens. After clearing the lot out, I ran the swarm back into the parent hive, and they are now working in section. But I am unable to account for such a lot of queens being reared in one hive. Can you explain the reason? I may say the above-named bees were bought at a sale last year; the then owner was known to have a lot of bees from abroad. I think this may account for their outlandish tricks. I should like to know what you think, as it looks as if I had mismanaged the bees in some way to have all this trouble; whereas I have given every attention to them and treated them just as I do my own in every way.—C. R., *Wickford, July* 21.

REPLY.—It is a well-known fact that some foreign races of bees produce an extraordinary number of queens at swarming time. The highest number we can call to mind is recorded of native Egyptian bees at Cairo, which appeared in our monthly, the *Record*, of December, 1895, under the heading, "Bee-keeping in Egypt." The writer says, when speaking of "Queen-raising Extraordinary":—"On February 23 a native colony of native bees swarmed from a "W.B.C." hive, and the swarm was skepped by my man. He afterwards handed me twenty-seven queens,

which had been thrown out of the skep. The swarm was placed in another "W.B.C." hive, and on the following morning I picked from the flight-boards of parent and new hive forty-nine queens. A further eighty-two queens were taken away by General F. as specimens. We under-estimated when we said about fifty were left on the ground, so this gave us 27+49+82+50=208 queens actually hatched out at the time of swarming! The parent hive was then opened, and all ten frames were found literally festooned with still sealed queen-cells; these were cut out and taken into town, and callers at the Ministry were surprised to see a score or so of queen-bees flying about the place, while others were hatching-out from the cells. At the suggestion of General F. I enumerated these cells, counting only those in which a queen existed at the time. There were more than 200. This brings the figure to 408 queens in this single colony. I then counted all cells, sealed or vacated, and they actually totted up to more than 600!! In view of this nice condition of things, I considered it about time to look at the other hives; but after cutting fifty-four cells from the three end combs of one stock I gave it up. Every native colony was in the same condition, and beautiful straight combs of worker-cells were ruined. Quite 50 per cent. of the whole were only fit for melting down! You can easily gather from this that swarms were the order of the day; but I secured very few. I am quite certain that my man discovered the swarms when they had clustered, and carried them off at night, otherwise he would not have turned up morning after morning with his eyes bunged up with stings, as was the case.

[2935.] *Bee-keeping in China.*—1. Can you or any of your readers tell me the best way of inducing bees to gather honey on the hills in Hongkong? From April to September the temperature in the shade varies between 75 deg. at night and 85 deg. in the day. October to December it drops 10 deg. to 20 deg., January and February it is colder, with usually two or three weeks of slight frost, but in March it begins to heat up again. Owing to the foggy weather we have off and on in February to May the bees at times for three or four days together do not get out much, and in the colder weather (October to January) when we have usually bright days with a good hot sun from 9 a.m. to 4 p.m., they seem to do as much or more work than in the hot weather of summer. It is perhaps owing to these bright, hot days in the cool season that they do not store much. In January to February the days are often hot enough to bring them out, so they can work more or less all the year through. I may say the bees are much the same to look at as the ordinary English bee, but only about two-thirds of the latter's size. 2. Cockroaches are very troublesome, and as they fly readily I would like to know what is the best way of preventing them flying into the entrances of the hives? 3. Is it too hot for the bees to place the hives in the sun with a double roof? If stood in the shade under trees the ants drop down in numbers on to the hive-roofs. 4. Is it necessary to feed on loaf sugar? Raw sugar can of course be obtained much cheaper. 5. I have been using hives holding ten frames, standard size. Perhaps as the bees are smaller than English and not likely to do half as much work as the latter, it would be better to use a different hive. If so, what do you suggest? 6. Would it be possible to take English queens to Hongkong (five weeks' journey), and how many bees should be sent with each queen, and what is the best way of packing, watering, and feeding them? I enclose name, &c, while signing myself—HONGKONG, *Salisbury, July* 17, 1902.

REPLY.—1. We will be very glad if any B.J. reader possessing some knowledge of bee-keeping in China will forward such particulars as may be helpful to our correspondent on queries 1 and 2. For the rest, we may reply to such questions as do not require local knowledge as follows:—3. In hot climates the most useful protection for bees against heat is a hive with a loose outer case, similar to the hives used in this country. 4. Refined sugar is far the best for bee-food, the treacle or molasses in raw sugars being apt to cause dysentery. 5. We should prefer the B.B.K.A. Standard frame. 6. Of our English dealers we think Mr. Sladen, of Ripple Court, near Dover, or Mr. E. H. Taylor, Welwyn, Herts, could afford useful information on this point, as being well versed in the export trade.

[2936.] *Unicomb Observatory Hives.*—I have made a one-frame observatory hive for use in a shop window according to the dimensions given in "A Modern Bee Farm," by S. Simmins, but the width is not given. I therefore ask—1. Is a 2-in. space right, as it just takes the frame and leaves a bee-space between comb and glass side of hive? 2. Can the bees be exposed night and day in shop window without any covering, say for two weeks, or should they have warm covering at night? I notice the queen (a three-year-old, I think) has laid in all the empty cells and can now be seen dropping the eggs anywhere.—CONSTANT READER, *Kendal, July* 28.

REPLY.—1. As the upper portion of combs are frequently built out to a thickness of over 1½ in., it may be well to allow a clear 2¼ in. between the glass sides of the hive. 2. Unless weather is warm, a warm covering of some kind will be needed at night, and we should not expose the hive for more than one week at a time without allowing the bees a chance to fly for a day for cleansing purposes.

[2937.] 1. *Bee-Keeping near Liverpool.*—As it is necessary for me to move my bees from present position, I am writing to ask if you or any of your readers can tell me the best neighbour-

hood for bees within a few miles of Liverpool? West Derby, Prescot, Knotty Ash, or any other of the eastern suburbs preferred. While moving I want to locate them in the best available district, hence my asking your advice. 2. *Effect of Stings.*—Since commencing keeping bees last September I have received half-a-dozen stings. I suffered no inconvenience from the first five, although two were on the face. There was no swelling and only a slight tingling for a time. The sixth sting, however, more than made up for the others. I was stung on the nose, and, beyond removing the sting, took no further notice at first; but it commenced to swell and continued swelling for about twenty hours, by which time my appearance was, to say the least, a remarkable sight. My eyes were almost closed, cheeks were puffed out very much, and my upper lip about three times its usual size. This was getting serious, so I visited the doctor, who said that either my blood was out of order or the bee had been feeding on something poisonous just previous. Now, if future stings were to affect me in a like manner I will have to give the bees a wide berth. I do not think my blood is out of order, as I was stung on the head a week or so before and no swelling followed. What is your opinion?—G. GELDARD, *Walton, Liverpool, July* 15.

REPLY.—1. West Derby was a fairly good bee district when we knew it twenty years ago, but the suburban districts of Liverpool are so changed since our time, we cannot safely answer. Perhaps some local reader will reply. 2. There is no accounting for such incidents as you relate, beyond some such explanation as that given by the medical man you consulted.

[2938.] *Managing Swarms.*—I am anxious to know your opinion. I had a swarm of bees in the latter end of June; they were put in a box with twelve frames, and with quarter foundation. As they seemed languid in working, standing about entrances, &c., I examined box, taking out each frame super while looking for queen. I may say I am only starting bee-keeping, and would not know a queen, I believe, if I saw her. In any case, I could see no queen. The frames are well filled with honey around the outside, while some of the cells in the centre are half filled with pollen. There were no capped cells. I therefore ask: 1. Could queen be dead, and they still gather honey? 2. If queen was living for past four weeks, would it be easy to see young brood? 3. Should I get a queen and introduce her, as am afraid of losing it; it was very strong swarm? A second swarm came off the same box four days after, and is doing well. You see very few bees carrying in pollen.—J. H. SCOTT, *Co. Down, July* 24.

REPLY.—1. The symptoms seen point to queenlessness. 2. Brood should certainly be seen in combs before now if queen is there and mated. 3. Either introduce a fertile queen or add a small swarm, with queen, to the stock.

[2939.] *Destroying Vicious Bees.*—Would you kindly answer the following query in the columns of the BRITISH BEE JOURNAL. I have two very strong stocks of bees which are so vicious that it is impossible to do anything with them, so I have made up my mind to destroy them at the end of the honey season. Would you kindly advise me as to the best means of doing this? Would smoking them with sulphur taint the honey, or would cyanide of potassium fumes injure the honey in any way?—"APICULTURIST," *Tavistock, July* 26.

REPLY.—Make a hole in ground and insert therein an old tin lid with an ounce of sulphur, drop a hot coal in the sulphur, and lift the hive off its floorboard (after smoking the bees a little at entrance), and drop it gently over the burning sulphur. In one minute all will be over with the bees, and little harm done to honey.

[2940.] *Bees Fighting amongst Themselves.*—Will you kindly give me your advice on the following?—I got one of Lee's "Crystal Palace Supers" this year, and put it on a hive; but the bees not being very strong I afterwards removed it to a strong stock above a box of shallow frames nearly full. Directly after the bees began to carry "black shiny bees" out, which I thought at first were robbers, although I did not notice any robbers about entrance. After being on for about three weeks I removed the shallow frames, and put a rack of sections on, when the bees at once stopped carrying dead or dying bees out of the hive. The shallow frames were fitted with Super "Weed" foundation same as sections. The removed box stood on an adapter with excluder zinc, so that the bees had to go through two excluders. Every time I lifted quilts the bees would rush out at top at full speed, and the noise and commotion was quite different to an ordinary super. They did not work at all in super. I thought it might be the smell from the wood. 2. Can you recommend the plan for driving and carrying bees in bags given by J. Simkins in No. 834, vol. xxvi., N.S. 442? Last year I united a first and second swarm after killing queen of first, but they fought and made young queen's wings quite ragged. Dusting with flour did not cure them until I put a frame of brood in, when they at once settled down. Is this usual, as I never expected it? Your answer will oblige.—JOSEPH EDGERLEY, *Chorley, July* 28.

REPLY.—1. The only reason we can give for what you describe is that the bees have been fighting among themselves owing to the fact of honey from an alien stock being given them. This has occurred at rare intervals in

our experience, and we quite think it is so in your case. 2. Yes, it has answered very well.

Echoes from the Hives.

Salperton, Cheltenham.—I have, along with others, to complain of the weather all through June. It was very much against bee-work here; consequently, swarms in this district are scarce. Being a young hand, I may be a bit anxious, but that is, I think, better than not caring whether the bees live or die. On June 10 I tried driving the bees from skep, and running them into a frame-hive, but am afraid I drove too many bees from skep before queen walked up. Still, I do not mind if those left behind will prosper by my feeding well on medicated syrup. They take down about a pint a day. Could you give me name of secretary of Glos. B.K.A., as I am desirous of joining? The last few days, finding a quantity of drones (immature) cast out, made me "look up" back numbers, and find my answer in B.J. (2833, page 178).—C. R. HOPKINS.

Grantown-on-Spey, July 25.—We have had a most disastrous season here. Only one day of sunshine this month. Continual rain and snow on hills yesterday. Swarms are almost unheard of and surplus honey is not to be thought of. In fact, stocks are living from hand to mouth.—P. C.

PARTHENOGENESIS.

LESSONS IN HEREDITY FROM BEES.

It was first announced in 1845 that, although impregnation is necessary to produce female bees, the male bees develop from unfertilised eggs. In an article on this subject in the *Deutsche Revue*, Professor J. W. Spengel, of the University of Giessen, states that it required more than ten years of additional research to convince scientific men that the rule applying to the majority of animal forms admits of the exception now termed parthenogenesis. The writer goes on to say:—

"Now if all female bees, the workers as well as the queens, have developed from fertilised eggs, and all male bees (drones) from the unfertilised, since the queen is the only one to lay eggs, the kinds of relationship between the three classes of bees are most unique, and must be remarkably instructive as regards heredity.

"Take the progeny of any queen-bee, which commonly consists of a queen, numerous workers, and several drones; and among these children of this same mother, the young queen and the workers are sisters, but the drones are only their half-brothers, because they have not the same father, or, in fact, no father at all. Of course, they all have a common grandfather—the one on the mother's side. The workers remain childless all their lives, sustaining the relation of aunts to the numerous sons and daughters of their married sister, the queen. The drones never have any other children than daughters.

"This situation provides for most interesting deductions on the process of heredity—(1) the male properties of the drones cannot have been inherited from the parents, since they have only a mother; (2) the drones do not transmit their masculine characteristics to their descendants, since the eggs that they impregnate never produce other than females; (3) the workers possess characteristics that were not present in either father or mother, which accordingly they could not have inherited, and which, being incapable of reproduction, they cannot transmit to descendants.

"Before an attempt to solve these apparent contradictions, we glance at the most important differences amongst the three classes, physical and mental:—1. Aside from the reproductive organs, there is variation in size, in which the queen is superior to the drones, and these to the workers. 2. Hairs and bristles grow on the workers' hind legs, and serve as brushes and baskets for collecting pollen from the flowers. 3. The workers have a peculiar development of instrument of the mouth, including the unusually long tongue for licking up honey. 4. Wax glands are provided for the workers. 5. The sting is present in the females, the queen, and the workers, but wanting in the drones. 6. The eyes are smallest in the queen and somewhat larger in the workers, while in the drones they are so large as to meet upon the upper surface of the body. The well-known mental differences are in as sharp contrast. While the workers are remarkable for activity, skill, and loyal sacrifice for the state, the entire mission of the queen and drones is reproduction of their species; the queen being assiduous in the deposit of eggs, the drones stupid and slothful. How has heredity produced the characteristics peculiar to the workers and the drones?

"The heredity of the queen presents fewer difficulties, inasmuch as her development from an impregnated egg is not peculiar except for the constancy of similarity to the mother; in other words, for the fact that the masculine properties of the father never develop. If, however, the queen and her husband differ in other characteristics, as when a light-haired Italian queen is united to a black-haired German drone, the queen children of the union as well as the worker children bear the marks of both parents as regards the hair, some resembling the father, others the mother.

"But when workers develop from the fertilised

eggs, it is not according to the usual process of heredity. These young bees have characteristics not to be found in either of the parents or of the grandparents, but only in their aunts and grand-aunts who have had no share in their procreation. However, if the queen can transmit to these worker descendants characteristics foreign to her own, we must assume their existence within her in a latent state. The fact is, every fertilised egg of a bee contains the possibility of development into either a worker or a queen. That depends altogether upon the nourishment of the larva into which the egg is first developed. After a certain day in the course of development, the specific diet that develops workers is steadily supplied to those of the larvæ destined for the worker class. Marvellous and mysterious as the fact is, it has no bearing upon heredity.

"But how about the heredity of the drones, with neither a father from whom they could have inherited their masculinity, nor sons to whom they can transmit it? At first this seems more remarkable. However, as soon as we recognise that they have a grandfather and grandsons, we perceive that it is not necessary to posit any other variety of heredity than atavism. Of course, it is not the usual form of atavism, since this is unvarying and of necessity, while usually the kind of heredity which overleaps a generation is, if not exceptional, at least only one of many possibilities. Here, again, the crossing of German with Italian bees has furnished important information and enabled us to establish the facts.

"The most amazing thing is that the bee workers, which are incapable of reproduction, should nevertheless preserve their characteristic marks with a constancy we have been accustomed to explain as the result of heredity. Because this class is of the greatest importance to bee-folk, it is the more remarkable that they are not capable of transmitting their characteristics to descendants of their own. Are they not the ones who perform all of the labour? Does not the weal or the woe of the state depend upon their activity, their capability? If there has been evolution of the bees, it must have been especially the workers who have undergone the process. But how can that have been transmitted by inheritance to the others? The explanation must be derived from the fact that the workers are the queen's sisters, whose differences have developed from a difference of diet; accordingly that the queen is in possession of the characteristics of the workers, only the variations have remained latent. And these, by means of her eggs that become fertilised, she transmits to those of her female descendants that are destined for the worker class. However, this affords proof that it is only the innate characteristics of the workers that the queen is able to transmit; she never comes into possession of their acquired ones."—Translation made for the *Literary Digest* (New York).

Bee Shows to Come.

August 2, at Helsby, Cheshire.—Flower show and athletic sports. Three classes for Honey and Wax open to all bee-keepers in Cheshire. C.B.K.A. medal for best exhibit by member. Schedules from Dr. Briant, Helsby, Warrington. **Entries close July 26.**

August 4, at Lichfield (Bank Holiday).—Honey show in connection with the Lichfield Floral and Horticultural Society. Open classes for Sections and Extracted Honey. Five prizes each class, 20s., 15s., 10s., 5s., 2s. 6d. Schedules from F. J. Hall, hon. secretary, City Station Wharf, Lichfield. **Entries clese July 28.**

August 4, in the Walled Meadow, Andover.—Honey Show in connection with the Andover and District Horticultural Society. Class for single 1-lb. jar of extracted honey (with no entry fee). Also classes for sections, extracted honey (light and dark), bell glasses, honeycomb designs, and beeswax. Schedules from the Hon. Sec., Dr. Gillett, Elvin House, Andover. **Entries close July 28.**

August 4, at Exeter.—Annual Show of the Devon B.K.A., in conjunction with the Exhibition of the St. Thomas Cottage Garden Society. Eleven open classes. Schedules from E. E. Scholefield, Hon. Sec. Devon B.K.A., Heathfield, Chudleigh, S. Devon. **Entries close July 28.**

August 4, at Melton Constable Park.—Annual Show of the North Norfolk B.K.A. Four open classes, including one for single 1-lb. Jar of Honey and one for 1-lb. Section. Schedules from C. J. Cooke, Hon. Sec., Edgefield, Melton Constable. **Entries close July 26.**

August 5, at Leamington.—Ninth annual show of the Leamington St. Mary's Horticultural Society. Three open classes for Six 1-lb. Sections, Six 1-lb. Jars "Light," and Six 1-lb. Jars "Dark" Extracted Honey, respectively. Liberal money-prizes. Schedules from P. W. Smith, Secretary, 22 Leam-street, Leamington. **Entries close July 31.**

August 6, at Neston Park, Wilts.—Honey show in connection with the Atworth and District Horticultural Society. Fourteen classes for Honey and Bees, including classes for single 1-lb. section and single 1-lb. jar, with free entry. Schedules from J. P. Inkpen, Secretary, Neston, Corsham. **Entries close July 30.**

August 6, at Clutton, Bristol.—Honey Show of the Bristol B.K.A., in connection with the Clutton and District Flower Show. Liberal prizes. Six open classes for honey and bee-appliances, including classes for single 1-lb. section and single 1-lb. jar extracted honey (entry free). Schedules from Jas. Brown, hon. sec., 31, Bridge-street, Bristol. **Entries close July 31.**

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition. Three open classes with special prizes, including one for single 1-lb. jar of honey. (*Entry free.*) Prizes 20s., 10s., 7s. 6d., and 2s. 6d. Schedules from R. Hefford, Sunnyside, Kingsthorpe, Northampton. **Entries close August 1.**

August 13, in the Grounds of Hardenhinch Park.—Honey show in connection with the Chippenham & District Horticultural Society. Twelve classes for Honey and Bees, including **open classes** for single 1-lb. section and single 1-lb. jar (with no entry fee). Schedules from W. Small, Secretary Market-place, Chippenham, Wilts.

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13, at Radstock, Bath.—Honey show in connection with the annual show of the Radstock and District Horticultural and Fanciers' Association. Schedules from the Secretary, B. M. Clark, 1, Fox Hills, Radstock, Bath.

August 13 and 14, at Dudley.—Annual show of the Worcestershire B.K.A. in connection with the Dudley Horticultural Society. Schedules from A. R. Moreton, Leigh, Worcester, show secretary. **Entries close August 6.**

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 14, at Goole.—Bee and honey show in connection with the Goole and District Agricultural Society. Six open classes, including one for single 1-lb. extracted honey (with free entry). Schedules from J. Luddington and H. S. White, Secretaries, Lindum House, Goole.

August 16, at Ammanford (S. Wales).—Honey Show in connection with the Ammanford Flower Show. Judge appointed by the B.B.K.A. Liberal prizes for single 1-lb. section and single 1-lb. jar extracted honey, also classes for three sections and three 1-lb. jars light and dark honey. One local class. Particulars from Mr. Ivor Morris, Hon. Secretary, Ammanford, R.S.O. **Entries close August 12.**

August, 16, at Endmoor, in connection with Flower Show. Open classes for comb and extracted honey. Schedules from Mr. W. Oldfield, Endmoor, Kendal. **Entries close August 9.**

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fête in "The Quarry." Bees, Honey, Hives, and Appliances. Thirteen Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Barnton, Northwich.—Honey Show in connection with the Flower Show. Honey department—Seven local classes and one class (open to all Cheshire) for twelve 1-lb. jars "light" honey. The Cheshire B.K.A. bronze medal goes to the winner of first prize in this class. Schedules from Mr. S. Wade, Hon. Sec., Barnton, Northwich. **Entries close August 16.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 26, at Cartmel, Lancs.—Honey show in connection with the annual show of the Cartmel Agricultural Society. Open classes for Six Sections and for Six 1-lb. Jars Extracted Honey; also for beeswax in cakes for domestic use. Special prizes for members of the Lancashire B.K.A. and for county bee-keepers. Schedules from Wm. Cragg, secretary, Cartmel. **Entries close August 16.**

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 27 and 28, at Uttoxeter.—Bee and Honey Show in connection with the Annual Show of the Staffordshire Agricultural Society. Fifteen classes for bees, honey, and appliances. Open classes for 12 1-lb. sections, 24 1-lb. jars, and 12 1-lb. jars extracted honey respectively. Schedules from Rev. G. C. Bruton, Hon. Sec. Staffs. B.K.A., Great Haywood Vicarage, Stafford. **Entries close August 2.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries close August 2.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 10 and 11, in Waverley Market, Edinburgh.—Midlothian Bee-Keepers' Ninth Exhibition. Seven open classes. Prize money, 12s., 8s., 4s. Entry 2s. Schedules from W. Weir, Heriot, Midlothian. **Entries close September 3.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules ready shortly, from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

C. H. B. (Ashley, Newmarket). — *Safety Boxes for Honey.*—The Safety Paper and Box Manufacturing Co., High - street, Borough, E.C.

JOHN HAMILTON (Belfast).—*Honey Samples.*—Honey as sample is quite wholesome as food for those who can take it as such, but its disagreeable odour and rank, coarse flavour render it unfit for table use. We should say it was gathered where "privet" was blooming freely.

A. R. HESSELWOOD (Yetford).—*Driving Bees from Box.*—1. An experienced would find little or no difficulty in removing the bees from box by "driving" not quite "in the ordinary way" as stated, but with only such modifications as present themselves when operating. 2. The hands alone —when beating on sides of box to cause the bees to "run"—would answer quite as well as the "mallets" you suggest.

J. STONE (Derby).—*Height for Bee-Screens.*—There is no fixed height for these. If the roadway is more than a dozen yards away a screen to cause the bees to fly over the heads of passers-by is of no use for the purpose intended. Say what is the distance between hives and roadway and we will advise further.

BASILDON (Bexley). — *Moving Bees Forty Yards.*—On no account should hives stocked with bees be moved to a location 40 yards away at this season. To do so would cause the loss of hundreds—probably thousands—of bees through their going back to the old stands and being unable to find the new ones. The removal should either be deferred till winter—when bees are sometimes confined to their hives for several weeks at a spell — or else be moved temporarily two or three miles away for a few weeks, then brought back to the desired new location near their present one. Either of these latter courses will prevent bee loss.

L. ROYDEN (Liverpool).—*Sugar for Bee-food.*—Your question last week mentioned only sugar for sprinkling over bees when "uniting." Hence our reply on page 300. The sample of sugar now sent is entirely unsuitable for bee-food. It is raw cane sugar of the darkest, coarsest kind. In consequence contains a large percentage of treacle or molasses. Refined cane sugar only should, for obvious reasons, be used in all food for wintering bees on, seeing how seldom they can leave the hive for a cleansing flight.

C. REED (Wickford).—*Fermenting Honey.*—1. We can offer no explanation why certain jars of granulated honey—gathered over a year ago—should just now "show signs of starting to 'work' (*i.e.*, ferment) like new wine," as stated, beyond saying it is owing to chemical action set up by the temperature. The fact that other jars kept in same place remain solid only serves to show that the top portion of honey in bulk may be unripe and liable to fermentation, while the lower sort of the same "bulk" will remain in perfectly good condition.

DERBY (Ambergate).—*Recipes for Mead and Honey Vinegar.*—The best recipes we know of for making either of the above are contained in the pamphlet, "Mead and How to Make it" (price 4d.), published by the Rev. G. W. Bancks, Dartford, Kent.

West Malvern as a Bee District.—Mr. W. Herrod, Apiarist of the Horticultural College, Swanley, Kent, writes—"Will some reader kindly inform me as to the capabilities of West Malvern as a bee district?

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

CYMRAES (Anglesea) and J. S. LAWTON (Bridgnorth).—Beyond a very slight trace of incipient foul brood, the comb sent in each case contains only chilled brood.

NOVICE (Rotherham).—Comb contains pollen only.

J. H. S. (Dunsford).—Comb contains foul brood of old standing.

P. C. (Grantown-on-Spey).—There is foul brood—in the incipient stage—in both samples; but we have no doubt that almost all the dead larvæ in both pieces of comb would have hatched out if left in the hive. The disease seems to be only just developing, to judge by sample.

H. E. (Woodgreen).—We find no disease in comb sent; but with regard to the "something wrong" which you suspect, it arises from a drone-breeding queen. There is none of what you term "digging away the cells" by the bees; on the contrary, they are lengthening out worker-cells to accommodate drone-brood.

W. B. (Blackley).—Comb is affected with foul brood of old standing.

*** *All specimens of comb and honey samples received on the 29th must stand over till next week.*

Editorial, Notices, &c.

THE COMING SHOWS.

Among the more important of the bee and honey shows for which the date for closing entries is close at hand we invite attention to the Great Guild Show at Preston. This important fixture is held on September 1 to 6—that is, Monday to Saturday—and the Royal Lancashire Agricultural Society have the advantage this year of holding their annual show in the festival week of the Ancient Guild Merchants, which takes place but once in twenty-one years and is made the occasion of a general holiday week by thousands of visitors from all parts of Lancashire and the surrounding counties. The entries finally close on Monday next, the 11th inst., and as the prize list is considerably augmented for the occasion, the comparatively few fortunate ones who have secured good samples of honey this year will miss an exceptional chance of valuable money prizes, silver medals, &c., if they allow the 11th to slip by without entering an exhibit.

YORKSHIRE AGRICULTURAL SOCIETY.

ANNUAL SHOW AT LEEDS.

The annual show of the above society was held on July 30 and 31 and August 1 at Roundhay Park, Leeds.

The bee and honey section was fairly well supported, with a total of sixty-seven entries, which in so moderate a season as the present one compares well, against fifty-three last year. Owing to the sudden illness of Mr. Fred. A. Pay, who has for some years past lectured in the bee-tent, the usual bee-demonstrations did not take place on the first day, but it was hoped that the tent lectures would go on as usual later in the week.

The display of honey was smaller than usual, owing to the adverse season in the north. Some good samples, however, were staged in the five classes devoted to honey and beeswax.

Mr. F. Boyes, Beverley, judged the bee and honey exhibits and made the following awards :—

Collection of Hives and Appliances.—1st, William Dixon, Beckett-street, Leeds ; 2nd, E. H. Taylor, Welwyn, Herts ; 3rd, R. H. Coltman, Station-street, Burton-on-Trent.

Complete Frame Hive for General Use.—1st, R. H. Coltman ; 2nd and 3rd, E. H. Taylor.

Observatory Hive with Queen and Bees.—1st, E. H. Taylor ; 2nd, W. Dixon.

Display of Honey and Bee Products.—1st, W. Dixon ; 2nd, R. H. Coltman ; h.c., W. Shepherd, Tadcaster.

HONEY AND WAX.

Twelve 1-lb. Sections.—1st, W. Dixon ; 2nd, H. Waddington, Boroughbridge ; 3rd. T. Hood, Pickering.

Twelve 1-lb. Sections (Heather Honey).—1st, W. Dixon ; 2nd, H. Waddington.

Twelve 1-lb. Jars Extracted Honey.—1st, T. S. Holdsworth. Kirton Lindsey, Lincs. : 2nd and 3rd, W. Dixon ; h.c, J. Pearman, Derby.

Beeswax (not under 3 lb.).—1st, T. Hood ; 2nd, E. H. Taylor.—*Communicated.*

GLAMORGANSHIRE B.K.A.

ANNUAL SHOW.

The first annual show of bees, honey, and appliances under the management of the above re-formed Association (in connection with the Cardiff and County Horticultural Society) was held on July 23 and 24, in Lord Bute's charming and capacious "Sophia Gardens," so deservedly admired by visitors to the "Royal" last year. The show as a whole—the honey department in particular—was an immensely successful one, alike from the financial and the exhibitor's point of view. This was undoubtedly to a great degree due to the delightful weather which prevailed. Bearing in mind that the organisation was resuscitated so recently as June 20, and that the season is a poor one, the officials of the Association naturally feel much encouraged by the unqualified success of the show.

Messrs. Robert Drane and W. G. Preece were appointed judges and made the following awards :—

Twelve 1-lb. Sections.—1st, W. T. Lewis, Llandaff ; 2nd, A. Hamer, Llandilo Bridge ; 3rd, G. H. Mitchell, Cardiff.

Twelve 1-lb. Jars Extracted Honey (light).—1st, R. Morgan, Cowbridge ; 2nd, G. P. Workman, Llanishen ; 3rd, John Morgan, Pontypridd.

Twelve 1-lb. Jars Extracted Honey (dark).—1st, G. W. Kirby, Bristol ; 2nd, William John, Pontypridd ; 3rd, C. H. Dare, Llanharan.

Three Shallow Frames of Comb Honey.—1st, C. T. Jenkins, Pontypridd ; 2nd, R. Morgan ; 3rd, J. Boyes, Cardiff.

Collection of Hives and Appliances.—1st, E. H. Taylor, Welwyn, Herts.

Messrs. J. Boyes and W. G. Preece gave at intervals each day lectures and demonstrations in the bee-tent, which was besieged by attentive audiences.—W. RICHARDS, Hon. Sec., Glamorganshire B.K.A.

HENBURY DISTRICT B.K.A.

ANNUAL SHOW.

The annual show of the above Association was held in connection with that of the

Henbury Horticultural Society at Henbury, near Bristol, on July 30. The 180 ft. of new staging provided by the Association this year was well filled by the 100 entries received, and the way in which the exhibits, together with the choice profusion of cut and pot flowers and ferns, were arranged, evoked the unstinted praise of the judges and marked appreciation of the hundreds of visitors to the honey tent. Messrs. S. Jordan (Bristol) and G. Lovell (Wrington) officiated as judges, and made the following awards :—

OPEN CLASSES.

Honey Trophy.—1st, J. Seldon, Umberleigh, N. Devon; 2nd, W. G. Barnfield; 3rd, H. F. Jolly, Henbury.

Twelve 1-lb. Sections.—1st, W. Woodley, Newbury; 2nd, J. Seldon; 3rd, C. A. Newman, Henbury.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Woodley; 2nd, C. A. Newman; 3rd, J. Seldon.

Single 1-lb. Jar Extracted Honey.—1st, Mrs. G. Dear, Middle Woodford, Salisbury; 2nd, Rev. W. A. Allan, Nailsworth, Glos.; 3rd, H. Goodsell, Biddenden, Kent; v.h.c., W. Thomas, Henbury.

Single 1-lb. Section—1st, J. Seldon; 2nd, H. Goodsell; 3rd, W. Thomas; v.h.c., E. Meares, Henbury.

Beeswax.—1st, C. A. Newman; 2nd, H. F. Jolly; 3rd, Mrs. Waller, Charlton.

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, C. A. Newman; 2nd, E. Prosser, Henbury; 3rd, Mrs. Waller; v.h.c., E. Meares.

Twelve 1-lb. Jars Extracted Honey.—1st, Mrs. Waller; 2nd, C. A. Newman; 3rd, M. Mills Baker, Hallen, Henbury.

Six 1-lb. Sections.—1st, E. Prosser; 2nd, M. Mills Baker; 3rd, E. Meares; v.h.c., W. G. Barnfield; h.c., C. A. Newman.

Six 1-lb. Jars Extracted Honey.—1st, C. A. Newman; 2nd, W. Thomas; 3rd, Mrs. Waller.

Three Shallow Frames of Comb Honey.—1st, M. Mills Baker; 2nd, W. G. Barnfield; 3rd, Mrs. A. Todd, Clifton.

Three 1-lb. Sections.—1st, W. Thomas; 2nd, Mrs. Waller; 3rd, C. A Newman; v.h.c., A. J. Weaver, Henbury; h.c., E. Prosser.

NOVICES.

Three 1-lb. Jars Extracted Honey.—1st, M. Mills Baker; 2nd, E. Prosser.

Three 1-lb. Sections—1st, E. Prosser; 3rd (no 2nd awarded), M. Mills Baker.

Silver Medal.—C. A. Newman with thirty points.

Bronze Medal.—M. M. Baker and E. Prosser equal with twenty points each.

Both medals given by Mrs. A. Todd.—W. G. BARNFIELD, *Hon. Secretary, H.B.K.A.*

NORTH NORFOLK B.K.A.

The North Norfolk Beekeepers' Association held their annual honey show in conjunction with the Melton Constable and District Horticultural and Agricultural Societies' Show, in Lord Hastings' beautiful park, on Monday, August 4.

Being favoured with fine weather, there was a large attendance of holiday makers, who were much interested in the exhibits, and also in the lectures given at intervals in the bee tent.

The honey staged was less in quantity and lower in grade than usual, owing to the very variable weather experienced this summer. The first prize sections in the Open class were generally admired. Mr. Brown, of Somersham, must be congratulated on his "win." The winners in the several extracted honey classes have also well earned their prizes.

The arrangements, in the able hands of Mr. C. J. Cooke, of Edgefield, were in every way satisfactory. Mr. T. I. Weston acted as judge, and made the following awards :—

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, and Bronze Medal, W. J. Norman, Harpley; 2nd, O. Goddard, Reepham; 3rd, H. W. Woolsey, Edgefield.

Twelve 1-lb. Jars Extracted Honey.—1st, and Silver Medal, W. Fake, Massingham; 2nd, W. J. Norman; 3rd, H. W. Lingwood, Hindringham.

Six 1-lb. Sections.—1st, R. O. Goddard, Melton Constable; 2nd, G. W. Woolsey.

Six 1-lb. Jars Extracted Honey.—1st, G. W. Woolsey; 2nd, J. Plattin, Briston.

Beeswax.—1st, H. W. Woolsey.

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, R. Brown, Somersham, Hunts.; 2nd, W. J. Norman, Harpley.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Fake, Massingham; 2nd, R. Brown; 3rd, W. J. Norman; 4th, H. W. Lingwood, Hindringham.

Single 1-lb. Section.—1st, W. Hatliff, Thoresway, Caistor; 2nd, H. W. Woolsey; 3rd, S. Meyer, Senr., Hamblington; 4th, W. J. Norman.

Single 1-lb. Jar Extracted Honey.—1st, S. Temblett, Andover, Hants.; 2nd, W. Fake; 3rd, R. Brown; 4th, W. J. Norman.—(*Communicated*).

HONEY SHOW AT HELSBY.

An exhibition of honey and beeswax was held in connection with the flower show at Helsby, Cheshire, on August 2. There were forty-seven entries in the various classes, and the quality of the exhibits was decidedly good, considering the bad season. The Rev. F. J. Backler judged the exhibits, and made the following awards :—

Six 1-lb. Jars Extracted Honey (open to

Cheshire).—1st, H. Potts, Sutton, Warrington; 2nd, Rev. E. Charley, Ince; 3rd, J. Griffith, Alvanley.

Beeswax (open to Cheshire).—1st, Rev. E. Charley; 2nd, Job Astbury, Kelsall.

Three 1-lb. Sections (open to Cheshire).—1st, Rev. E. Charley; 2nd, A. J. Briant, Helsby; 3rd, A. Thorpe, Westaston.

Three 1-lb. Jars Granulated Honey (local).—1st, Rev. E. Charley; 2nd, Job Astbury; 3rd, A. Newstead, Ince.

Six 1lb Jars Extracted Honey (local).—J. Griffith, Alvanley; 2nd, Rev. E. Charley; 3rd, A. J. Briant.

The Cheshire B.K.A. Bronze Medal for best exhibit by a member was awarded to Rev. E. Charley.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[4853] With the passing of the honey harvest the weather has not improved, and the bees have perforce been kept idle. The blossoms of the limes are now nearly past, and but very little honey has been gathered from them this season. There is some aftermath, if we could get a little nice, warm summer weather, which is wanted badly by the farmers to bring the harvest to perfection.

Requeening will require attention during the next month; it is not good policy to drive the matter far into September. This putting off till late in the season may leave your stocks weak in bees to go into winter quarters, and possibly another spring the stock will be in the same condition.

Ants are often a great nuisance to bee-keepers, and to the bees also, when they are disturbed and get down to the brood-nest; at this time of the year they are a great bother if they find out the store of honey. I myself had a few in the storeroom, and, tracing them to their nest, found it was quite the other side of the house. The ants were ever journeying to and fro, night and day (at least, they were passing between the house and their nest at ten to eleven at night, and the next morning early found them still moving). After sprinkling a little paraffin over the nest, the ants are nearly cleared out, only a few stragglers remaining on the track to the store. A deep hole made in the middle of the ant-hill will destroy many, or a tall bottle planted in their nest will catch numbers of ants. Another method is a kettle of boiling water poured over the nest. This kills instantly, and is as humane as the hole or bottle.

I hope our readers have provided our Editor with the means of gauging the honey harvest this year with its predecessors—a post-card is not an expensive matter, and the trouble is very small. In this district, I think we may say that the crop is about two-thirds of last year—quality good—no honey dew or dark honey. The later honey is good in quality, so we must take consolation in the fact that what we have is all good.

The price ought to be in accordance with the crop; at any rate, I hope bee-keepers will hold out for the best price they can make of their small return in produce. The prices of most goods have been in the ascendant for some time, except honey, which has been gradually reduced to its present price, often by the new hand, who fancies he will never be able to sell or eat his crop. One man advertised a few sections at 6d. in the suburbs of a wealthy town last month!—W. Woodley, *Beedon, Newbury.*

COMMENTS ON CURRENT TOPICS.

[4854] *A Disappointing Season.*—I have no hesitation in characterising the present season, viewed apiculturally up to date, as the most disastrous on record. On the closing day of July not only is there no super honey in even the strongest hives, but in almost all even the body-box contains only a few ounces. Drone capping, drone grubs, and any number of mature drones have been ejected from every hive for a week past, showing unmistakably the internal condition of the colonies in regard to the store cupboard. Surplus chambers, where left on, have been entirely deserted, owing to the low temperature and lack of nectar. The excessive cold has stunted the growth of bloom in the fields of white clover, and the heavy deluges of rain which have been so prevalent have washed out what small quantities of nectar the plants were able to secrete, so that even when we have had an occasional hour of sunshine (a very rare occurrence) the bees spent them in idle quest of the nectarious juice which should be, but was not, in the flowers. Swarms have actually to be fed to keep them alive, and several stocks require the same attention. On the 24th the higher Bens of the Grampians were white with a good coating of snow; and even lower down heavy hail showers have been frequent—a state of matters almost unexampled at this time of the year. So much for the dark and sombre side of the picture; but I am optimist enough to feel confident that it cannot last, and that good weather must follow the bad. As our heather season has yet to come, we have still a fair prospect ahead. Indeed, evident signs of amendment appear as I write, and August has

been ushered in bright and radiant, with barometer and thermometer both rising.

Honey.—The substances which have been recognised in honey are mainly sugar of two kinds, one crystallisable and analagous to glucose, and the other uncrystallisable—with some small percentage of gummy, waxy, colouring odorous matters—and pollen. Now sugar is the material into which starch is converted when made in the leaves in order that it may become transmissible over the plant. This substance before it can help the plant to grow is converted into cellulon, of which the cell-walls are built up and regularly nourished and repaired. Honey is thus found to be a very valuable building material necessary for the plants well-being. Fortunately for the bee it has not to go searching all over seeking for some weak point where it may rob the flower of its sweets, though at one time it is more than probable that it had to do so. Now plants yielding honey are provided with honey-glands or nectaries, and many even with honey guides to direct the bee just where to light in order that it may feast at its ease without any loss of time. These are interesting, and may form a useful comment at some future time. These nectaries are diverse in shape, number, and position in different flowers, but always present in some form in all honey-yielding plants. while they are absent in those yielding no nectar. It would appear that the flow of this sweet to the flower requires bright sunshine, a considerable degree of heat, a lusty growth of the plant, and a wealth of bloom. Conversely, cold east winds, dull sunless weather, and heavy rainfall hinder the flow or wash out the substance from the flower, an experience brought home to us this season, while an imperfect growth of the plant from any cause checks the flow of nectar and the glands do not develop.

Some Famous Kinds of Honey.—Both in ancient and modern times certain kinds of honey, by their superior excellence, have obtained a prominence which has made them known all the world over :—

1. *Hymettus Honey* was the produce of wild thyme and other aromatic herbs growing along the slopes of Mount Hymettus, a mountain in Attica. Its superior excellence is still maintained, though it is not produced in such quantity as it once was. I have a distinct recollection of Mr. Till writing some time ago that he had obtained a genuine sample which was to be tasted by several eminent bee-masters and reported on. It would be interesting to have the results of their deliberations.

2. *Hybla Honey* was obtained from Mount Hybla, in Sicily, and it had a reputation which gave its excellence a publicity far and wide. Shakespeare refers to it more than once. "A most sweet girl—as the honey of Hybla," is high praise of a fair maiden ; and a master of euphony is succinctly described in another line, "But for your words, they rob the Hybla bees." Some reader may be able to secure a specimen of this famous honey, and give us an estimate of its excellence when compared with the Grecian sample.

3. *Narbonne Honey* takes its name from a town in the South of France, and is considered to be possessed of a super excellence when compared with even the finest of French honey, though I have heard it credibly stated that a great part of what is sold under this name is produced hundreds of miles from Narbonne, and that some of it is even "made in Germany."

4. *Sage Honey.*—The famous sage honey of California is said to be very fine. Mr. Root is extra enthusiastic over it, and states that a nice sample is enough to call forth exclamations of surprise and delight, and he records that Mr. Langstroth declared it was almost identical in flavour with the far-farmed honey of Hymettus, a sample of which he had tasted. What greater praise could be awarded? As the plants yielding both samples are almost identical, there may be something in the contention.

5. *Highland Heather Heather* is the prince of them all. Taking the best points in each of these different kinds of honey and blending them all together we might get a result equal perhaps, but which would not excel, the produce of our glorious heather hills. I, for one, vote it the finest specimen of honey it is possible to obtain.—D. M. M., *Banff.*

SWARMS HIVING THEMSELVES.

[4855.] I have been living in London for the last six years, so my poor bees are not what they were. No one takes any notice of them, and I come home from time to time and do what I can, but until this year have lost all my swarms. I generally come home about Easter and super all the hives, and then they are left to their own devices till about mid-July, when I come home again and take the honey, and finally pack them up for the winter. I get a fair amount of honey, and the bees seem very happy and well. This year a very curious thing happened, which I thought would interest you. This spring one of my best hives wanted to swarm, and I had no time to swarm them artificially, so I placed a long hive, complete with wax guides, &c., beside the one referred to, and left them. I came home on July 1, and found both hives full of bees, and doing excellently. Another hive had an enormous cluster hanging outside, so I treated them in the same way, and on my return home last week, found I had captured an enormous and very valuable swarm ! I intend next year placing an empty hive beside each of my strong hives and watching to see the result. It is a common thing here for the villagers to see a cloud of bees flying about. They often tell me. I am sure they are my bees, but no one knows what becomes of them. —V. W. A. P., *Ashford, Kent.*

(*Correspondence continued on page* 316.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Mr. May, whose apiary is illustrated below, is still another bee-man of the true sort, one who makes his own hives and also makes his bees pay him for the labour bestowed, with the pleasure he derives from them thrown in. It is from such experiences as are detailed below that we encourage beginners in bee-keeping, and show that a market can be found for their produce if the business capacity is there. We also commend Mr. May's views on foul brood to all who read the following words; for the rest, his useful "Notes" speak for themselves. He says:—

"I began bee-keeping ten years ago by purchasing a bar-frame hive and a swarm. At that time I knew nothing about bees, but a friend gave me a little advice, and, with the help of the BEE JOURNAL, I soon picked up the rest. I have now increased my apiary with swarms and driven lots to eighty stocks. I make all my own hives and section-racks, and, being always on the look-out for good things, I have established six hives on the 'Wells,' or double-queen, system. These have done very well with me on the whole. I have forty lots of bees located close to my back door, the stands being placed under fruit trees, which latter are useful for the swarms to settle in, and also for shade, as I am also a poultryman, and keep the fowls all round the bees. Nor do I find any difficulty in keeping bees and fowls close together. One of the main things, to my mind, in bee-keeping is to have all the hives as clean as possible, with young queens heading every stock, and plenty of stores for winter. Also to wrap up well, and keep hives dry. I have two out-apiaries, for I find the bees do better when not crowded too closely together.

"Like most bee-keepers, I have had a touch of foul brood, but it does not stop very long with me, for at the first sign I break up the colony, treat the bees as a swarm, and start them in a clean hive with a young queen. I burn the old combs, and scorch the hive all over the inside with a painter's lamp. It is of no use to play with it, and I advise all bee-keepers to banish the pest from their places as quick as they can. If every bee-man in the kingdom would do the same foul brood would soon be stamped out. This is a fairly good district for honey, both for quality and quantity. I have had some very good 'takes' in my time. I generally manage to sell off all my honey of one year before the new season's crop comes in. My price is 8d. per lb. retail for sections and extracted, the wholesale price a little less.

"The question is often asked, 'Does bee-keeping pay?' For myself, I can answer, 'Yes, with proper management and plenty of hard work, and long days in the busy time.'

"Our crop for the present season is small—only about half the quantity I got last year—but the quality is very good."

MR. H. MAY'S APIARY, KINGSTON, WALLINGFORD, BERKS.

CORRESPONDENCE.

(*Continued from page* 314.)

TAKING BEES TO HONG KONG.

[4856.] Replying to your inquirer, "Hong Kong" (p. 305), I think that the risk in sending queen-bees to Hong Kong would not be great if they were well packed and properly attended to on the voyage. Just a few carefully-selected bees should be placed with the queen in a properly-provisioned, long-distance, mailing-cage. In hot places, for instance in the Red Sea, they should be kept at a temperature of about 70 deg. Fahr. The risk would be reduced by putting rather more bees than would go into a long-distance cage into a slightly larger box and feeding them occasionally. In this way I brought a queen of the Himalaya race of bees successfully from Darjeeling, in the Eastern Himalayas, via Calcutta and Colombo, to England, in March, 1897, and nearly six weeks elapsed between the time that she left her hive in Darjeeling and the time when she reached my apiary. Taking full colonies or swarms is attended with much greater risks; and the Italian bee, being less excitable and better able to stand heat than our native race, would probably also travel better.

I think your correspondent's chief difficulty may be not in taking the queens to Hong Kong, but in keeping them and their bees there. The late Mr. J. C. Douglas, of the Indian Telegraph Department, made several unsuccessful attempts at keeping Italian bees in Bengal. In the plains they quickly dwindled and died; those sent to the hill district of Darjeeling lived longer, but they ultimately shared the same fate. Their death was attributed to the attacks of various enemies.

The experiment your correspondent intends making is an interesting one, and deserves success.—F. W. L. Sladen, F.E.S., *Dover, July* 31, 1902.

BEE-KEEPING IN CHINA.

[4857.] As one who has had no little experience with bees in the tropics, will you permit me to reply briefly to your correspondent "Hong Kong," whose question appears on page 305 last week.

1. Bee-keeping in tropical countries is very much the same as in the temperate zones. The bees need a long rest during certain months of the year, when the queens practically cease to lay, and very little stores are gathered. The honey season (with spells of dearth) may last six, seven, or eight months. The quantities of honey collected is sometimes very great, the frames being filled in the course of a few days, especially during the honey flow of some particular and widely spread plant or flowering tree. At such times the extractor must be kept at work, else the bees will become "inert." Sometimes in the very middle of the hot season every cell is filled, so that the queens cease to lay, and the bees remain at home in a sleepy condition.

2. The bee your correspondent is familiar with is evidently the *Apis Indica*. The cultivation of this variety cannot be made profitable. The climate of Hong Kong would be quite suitable for the European bee, which thrives in the hottest regions, if properly taken care of, and protected from damp and the ravages of ants and other insects.

3. To obtain bees, your correspondent had better get his stocks from Australia. Steamers run direct from certain Australian ports, and the journey being about a fortnight's duration, the bees would be much more likely to turn up alive than if sent the very long voyage from home.

4. Bees in the tropics must be kept *dry*. Providing the hives have good roofs, it is as well to keep them in the sun. Trees or hedges may be near to break the force of the wind in unsheltered places.

5. The hives should be well made, so as to give no harbour in the joints to pests. Single-wall hives are the best, provided they be made of good wood. Such hives may be obtained from America or Australia.

6. To prevent cockroaches getting into the hives, the bees should be kept strong, and the entrances contracted.

7. Bees should not require to be fed in the tropics, if properly managed. Care should be taken that they always have a sufficient supply of stores for emergencies—like stormy or very hot weather.

8. English hives and standard frames are altogether on too large a scale for the diminutive *Apis Indica*. Surely English bees have been introduced into Hong Kong ere this!

9 It is needless to impress upon your correspondent the need of great care and watchfulness, as bees in the tropics suffer from many dangers and enemies. Damp is their greatest enemy. Swarms which go into the bush rarely have a prolonged existence.—W. H., *Hitcham Rectory, Ipswich, August* 5.

WEATHER REPORT.

Westbourne, Sussex.

July, 1902.

Rainfall, 1·63 in.
Heaviest fall, ·40, on 1st.
Rain fell on 10 days.
Below average, ·87 in.
Maximum temperature, 82° on 15th.
Minimum temperature, 39° on 4th.
Sunshine, 217·1 hours.
Brightest day, 8th, 14·8 hours.
Sunless days, 0.
Below average, 6·9 hours.
Mean maximum, 68·6°.
Mean minimum, 50·7°.
Mean temperature, 59·6°.
Below average, 1·1°.
Maximum barometer, 30·50" on 19th.
Minimum barometer, 29·71° on 27th.

L. B. Birkett.

CONVERSATIONS WITH DOOLITTLE.

REPLACING QUEENS.

"Say, Doolittle, I came this afternoon to ask you a question."

"Well, what is bothering you now, Mr. Smith?"

"I have several old hybrid queens that are past their usefulness, and have tolerated them thus far only as I thought it would be better to let them go through the honey harvest rather than to run the risk of less honey in replacing them while the harvest was on. These I wish to replace with young Italian queens. How and when shall I proceed to do it?"

"Perhaps we better take up the *when* matter first."

"Very good. How about the *when?*"

"This can be done at any time; but I find that the bees supersede more queens just after the main honey harvest for the season is over, in this locality, than at any other time of the year; consequently, where I wish to supersede queens for any reason I do it just after the basswood-honey season is over, as basswood gives our main honey-flow."

"But I live where white clover gives the main yield."

"Very well. Then your best time would be just after clover has failed, which would naturally be from July 1 to 15."

"I comprehend now. The superseding is to be done after any honey-flow has ceased where the person resides who wishes to do the superseding."

"Exactly."

"Then I am ready for the *how*."

"Unless a change in variety of bees is desired, I would advise the beginner to leave this matter of supersedure of queens to the bees, as they will make fewer mistakes, if this matter is left to them, than the smartest bee-keeper in the land—especially where there is any Italian blood in the bees."

"But I told you I wished to change to Italians."

"Yes, I know you did; but I thought it might be well to give you this hint, so that, after your bees became thoroughly Italianised, you need not think you must be superseding their queens all the while."

"That was all right; but go ahead."

"Where a change of the breed of bees is desired, then, of course, the apiarist must do it. The plan I use most, and like the best, is to start queen-cells just before the basswood-honey yield closes, when the bees are in the best possible shape to raise extra-good queens; then two days before these cells are ripe, or two days before the queens will emerge from them, I go to the colonies having queens which I wish to supersede, and hunt out the queens and kill them. Two days later the nearly mature cells are placed in queen-cell protectors and placed in these colonies."

"What are queen-cell protectors?"

"They are a sort of cone-shaped affair made of wire cloth or wire wound in a coil just a little larger than the cell, and having a hole about the size of a leadpencil in the small end for the queen to come out through when she bites the covering from the point of the cell. The A. I. Root Company keeps them for sale, and will send you a sample, if you so request, with 5 cents for the same. They are used to keep the bees from destroying the cell before they realise they are queenless, or for any other reasons."

"I am glad to hear of these; but does this insure a certain success in every case?"

"Not absolutely so; but my experience has been that, in nineteen cases out of twenty, young, thrifty, vigorous queens will be found laying in colonies thus treated, fifteen days later."

"But suppose I had rather buy my queens than to raise them?"

"If you do not wish to raise the queens, that is your privilege; but the apiarist who raises his own queens is independent, and no one is a full-grown bee-keeper till he or she learns to do this. But you can send away for the queens if you so think. But I would advise you to raise a few queens, in any event. It is something you will enjoy after you once try it, and will be time profitably spent besides, as there is little or no worry over the introducing part with the cells."

"I am glad you touched this introduction part, for I am not used to introducing queens. Is there much trouble and loss connected therewith?"

"With the old veteran there is little loss, and with the directions on the cages containing the queens there is little trouble. In this we are ahead of what they were a quarter of a century ago. As a few days without a laying queen is of little consequence at this time of the year, I would advise, to insure against loss in introduction, that the old queen be killed from nine to ten days before we try to introduce a new queen to the colony."

"What do you do this for?"

"This is to prepare them so they will want a queen so badly that they will surely accept the new queen when given. During these nine to ten days they will construct queen-cells from which to furnish themselves with another queen, and also perfect and seal all larval brood, so that they cannot construct more queen-cells, should all of these cells be taken off. Knowing this, we proceed on either of these days to open the hive, shake the bees off the combs, so we can readily see all the queen-cells which may have been started, cutting or breaking every one off. This makes the colony 'hopelessly queenless, as it is called, so that they are glad to take any queen that is offered them, so that the existence of the colony may be preserved. Now follow the directions sent with every queen, letting the bees eat the candy away till the queen is liberated, according to the instructions accompanying the queen."

"Have you any other plan?"

"If you do not wish to go to this trouble, there is another way which is usually successful. It is to remove the old queen in the forenoon of a pleasant day; and at night, after the bees have all returned home, give them a little smoke; and when they are filled with honey, allow the new queen to run in at the entrance, blowing in a puff or two after her. Do not open the hive in four or five days, in either case, and you will rarely fail." —*Gleanings* (American).

Queries and Replies.

[2941.] *Dealing with Unfinished Supers.*—May I ask for advice, through your columns, on the following matter? I have a strong stock in a frame hive, and now holding twelve frames; on the strength of the summer weather prevailing four or five weeks ago, I piled on a rack of sections and two shallow-frame supers one after the other in the usual way. As you know, the weather broke suddenly, and now each of the three supers is about half finished—combs built out, filled, and capped in the centre, and in course of construction at the sides. I am at a loss to know the best course to adopt. Would I be right in leaving the lot in on the chance of having better weather, feeding to produce comb in the meantime? Or should I reduce the shallow frames to one set, taking out the frames of foundation which have only just been started? Clover is plentiful, and in full bloom here at present, but the weather is wretched. The honey season has been poor all round here. I hope the people who have heather pasturage will have a better season.—W. O. J., *Newport, Mon., August* 4.

REPLY.—The only way of getting partly-filled supers finished at this late season is to take away all but those nearest approaching to completion; then wrap as warmly as possible, taking care to conserve the warmth of the surplus-chambers in every possible way by adding extra quilts.

[2942.] *Dead Queen Cast Out.*—In passing round my apiary on July 27 I was astonished to find a queen-bee (which I enclose) lying dead in front of one of the hives. I should be greatly obliged if you can tell me the cause of death, and, in the event of that particular hive proving queenless upon examination, what course you would advise me to pursue.—C. A., *Nantwich, July* 28.

REPLY.—Dead queen sent (a young one) is either an aborted queen or has been maimed while in the hive. The *tarsus*—or foot—of one leg is missing, apparently broken off during life, or shrivelled up in the process of hatching. If the intended examination you purpose making proves the old queen to be still in the hive, it shows that the queen cast out was useless. On the other hand, if queen cells are found, it is a case of superseding by the bees themselves.

[2943.] *Legal Protection Against Robbing Bees.*—I should be glad of your opinion to the following question: If, after taking all possible precautions myself to prevent robbing, I can prove that a neighbour's bees are doing that to mine, have I any legal redress?—F. G., *Brentford, August* 2.

REPLY.—There is no law that will help you in the above matter; indeed, it is difficult to say how any legal enactment could possibly meet the case. To attempt to fix liability on a bee-keeper for the "robbing" propensities of his bees would be, to our mind, absurd.

[2944.] *Bees for High Altitudes.*—Will you very kindly let me know what sort of bees would be the best for me to keep here in North Devon? We are nearly 1,000 ft. above sea-level, and have heavy rain in winter, sometimes up to April. Do you think the Ligurian bee would thrive here? and are Italian bees as strong as the English ones? Also, are they easier to manage?—LOUISE DUNNING, *North Devon, August* 5.

REPLY.—Seeing that the original home of the Ligurian bee is in the Italian Alps, it should be quite suitable for your district, while one of the chief characteristics of the pure Ligurian is extreme gentleness during manipulation. You should, however, be careful to get a queen of the pure race, not a hybrid, as the latter are sometimes troublesome to handle.

Bee Shows to Come.

August 7, at Kingsthorpe, Northants.—Honey show of the Northants B.K.A. in connection with the Horticultural Society's Exhibition.

August 13, in the Grounds of Hardenhuish Park.—Honey show in connection with the Chippenham & District Horticultural Society. Twelve classes for Honey and Bees, including **open classes** for single 1-lb. section and single 1-lb. jar (with no entry fee). Schedules from W. Small, Secretary Market-place, Chippenham, Wilts.

August 13, at Bradford Abbas, Dorset.—Annual Show of the Yetminster and district B.K.A. in the Vicarage grounds. Three open classes, including one for Single 1-lb. Jar of Light and one of Dark Honey (entry free). Prizes: 10s., 6s., 4s., in each class. Schedules from G. Leeding, hon. secretary, Bradford Abbas, Sherborne, Dorset. **Entries close Aug. 9.**

August 13, at Radstock, Bath.—Honey show in connection with the annual show of the Radstock and District Horticultural and Fanciers' Association. Schedules from the Secretary, B. M. Clark, 1, Fox Hills, Radstock, Bath.

August 13 and 14, at Dudley.—Dudley Horticultural Society.—Sections, Extracted Honey, Shallow Frames, Observatory Hives, and Wax. Schedules from H. Dickinson, Sunnyside, Dudley, Worcestershire.

August 13 and 14, at Dudley.—Annual show of the Worcestershire B.K.A. in connection with the Dudley Horticultural Society. Schedules from A. R. Moreton, Leigh, Worcester, show secretary. **Entries close August 6.**

August 14, at Goole.—Bee and honey show in connection with the Goole and District Agricultural Society. Six open classes, including one for single 1-lb. extracted honey (with free entry). Schedules from J. Luddington and H. S. White, Secretaries, Lindum House, Goole.

August 15 and 16, at Dumfries.—Open Honey Show, with Gold and Silver Medals and a handsome Silver Cup, among other liberal prizes. Particulars from Robt. G. Mann, Secretary, *Courier and Herald* Offices, Dumfries. **Entries close August 12.** (See larger advt. in this issue.)

August 16, at Ammanford (S. Wales).—Honey Show in connection with the Ammanford Flower Show. Judge appointed by the B.B.K.A. Liberal prizes for single 1-lb. section and single 1-lb. jar extracted honey, also classes for three sections and three 1-lb. jars light and dark honey. One local class. Particulars from Mr. Ivor Morris, Hon. Secretary, Ammanford, R.S.O. **Entries close August 12.**

August, 16, at Endmoor, in connection with Flower Show. Open classes for comb and extracted honey. Schedules from Mr. W. Oldfield, Endmoor, Kendal. **Entries close August 9.**

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fête in "The Quarry." Bees, Honey, Hives, and Appliances. Thirteen Open Classes for Honey. Schedules from S. Cartwright, Hon. Secretary, Shropshire B.K.A., Shawbury, Shrewsbury. **Entries close August 8.**

August 23, at Barnton, Northwich.—Honey Show in connection with the Flower Show. Honey department—Seven local classes and one class (open to all Cheshire) for twelve 1-lb. jars "light" honey. The Cheshire B.K.A. bronze medal goes to the winner of first prize in this class. Schedules from Mr. S. Wade, Hon. Sec., Barnton, Northwich. **Entries close August 16.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax. Liberal prizes. Schedules from T. A. Beckett, St. Werburgh's Chambers, Chester. **Entries close August 2** (at double fees August 9).

August 26, at Cartmel, Lancs.—Honey show in connection with the annual show of the Cartmel Agricultural Society. Open classes for Six Sections and for Six 1-lb. Jars Extracted Honey; also for beeswax in cakes for domestic use. Special prizes for members of the Lancashire B.K.A. and for county bee-keepers. Schedules from Wm. Cragg, secretary, Cartmel. **Entries close August 16.**

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 27 and 28, at Uttoxeter.—Bee and Honey Show in connection with the Annual Show of the Staffordshire Agricultural Society. Fifteen classes for bees, honey, and appliances. Open classes for 12 1-lb. sections, 24 1-lb. jars, and 12 1-lb jars extracted honey respectively. Schedules from Rev. G. C. Bruton, Hon. Sec. Staffs. B.K.A., Great Haywood Vicarage, Stafford. **Entries close August 2.**

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society. Open Classes for Honey-Trophy, Sections, Extracted Honey, Beeswax, Instructive Exhibits in Bee-Culture, &c. Schedules from Edward Bohane, Secretary, Miller-arcade, Preston. **Entries finally close on August 11.**

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 10 and 11, in Waverley Market, Edinburgh.—Midlothian Bee-Keepers' Ninth Exhibition. Seven open classes. Prize money, 12s., 8s., 4s. Entry 2s. Schedules from W. Weir, Heriot, Midlothian. **Entries close September 3.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath. **Entries close September 1.**

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (ready shortly) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees Honey, and Bee-appliances. Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

*** Referring to the question of "Locating Foul Brood," Mr. J. H. Horn, Bedale, Yorks, writes as follows:—"Allow me to

contradict the remarks made by 'B. Hive, *Bedale*' (2930, page 297), in B.J. of July 24, when he says: 'Foul brood is quite unknown here.' If he or any bee-keeper would like to see it I can show them stocks under treatment within the sound of Bedale Church clock, and can only say the district is full of foul brood. Perhaps he does not know it. I shall be pleased to receive name of 'B. Hive, *Bedale*.'"

*** We have received from the Post-office authorities a label bearing the words "Found unattached in W.C. District Office, August 7, 1902." The postmark is "Galashiels." The sender will therefore know why no reply appears.

BRENTFORD.—*Bee-Van Mismanagement.*—Without expressing any opinion with regard to the mismanagement you refer to, it would be very unfair to those concerned to publish your severe strictures without knowing the "other side of the story." We would therefore endeavour to ascertain from the Hon. Sec. of the Association—whom we know to be a hard worker in the cause—some particulars of the demonstration and lecture in question, and then decide as to publication.

J. CLEMENT (Penllergaer).—*Thistles as Bee-forage.*—Neither the field-thistle nor the double poppy are of any real value as bee-plants.

Honey Samples.

W. H. (Bucks).—No. 1 is good, but, being well on with granulation, will need reliquefying before it is eligible for the liquid honey class. No. 2. Good on all points. Either are good enough for any local show.

CYMRO (Penybont).—All three samples are good and quite fit for showing. There is very little difference in quality between them; No. 3 is, perhaps, best. You must pack more carefully if exhibits are to travel to show safely, two of the three jars being cracked in transit.

J. C. (Belfast).—Sample (from mixed sources) will do well for show-bench in a moderate competition, but hardly comes to first-class standard.

J. U. T. (Dover).—No. 2 is an excellent sample of honey, good on all points. The difference in colour observable in No. 1 is caused by the bees visiting forage later on, which yields darker coloured honey, but the bulk is much the same in both samples. No. 1 is good in flavour, and if the blackberry bramble is flowering freely it would tend to darken the colour, as would also the lime bloom in the present season.

O. JONES (Shrewsbury).—Your sample is from mixed sources, but we think its strong aromatic flavour is from "weed" growing in your locality.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

J. M. K. (Keith).—Comb contains "chilled brood" only.

W. W. W. (Wolverhampton).—Foul brood of old standing.

ANXIOUS (Horton).—Foul brood just developing in comb.

G. J. (Southport).—Seems a case of starvation, not disease, as all larvæ in cells is in the pupa stage, and shows no sign of disease. You should procure a copy of "Guide Book" for particulars with regard to treatment of foul brood.

T. WALKER (Glos.).—There is decided foul brood in a few cells of comb sent. It could have reached its present stage in the seven weeks stated; but other combs in the hive may, of course, show it in the later or spore stage.

F. HAMSHAR.—Sample No. 1 contains only "chilled" brood; in No. 2 the only sealed cells are full of hone. The unsealed ones contain pollen.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

TWO TESTED 1902 QUEENS, 5s. each. Arrival guaranteed. HOWES, Staple Hill, Bristol. 0 23

WANTED DRIVEN BEES, healthy and strong, state lowest price on rail. ERNEST OETZMANN, Lyndhurst, Slough, G.W.R. 0 21

HEALTHY DRIVEN BEES with Queen, 5s. lot. Boxes returned. A. MORETON, Bee Expert, Leigh, Worcester. 0 20

RIPENER WANTED, exchange good singing Cock CANARY, sell 7s. 6d. Fertile Queen, 2s. WALKER, Apiary, Earlestown. 0 25

SECTIONS and EXTRACTED HONEY WANTED (best quality Sainfoin or Clover). Mention price. F. SLADEN, Ripple Court Apiary, Dover. 0 12

WANTED DRIVEN BEES. State lowest wholesale price. DAWKINS, Cyprian Apiary, Sutton Coldfield. 0 26

DRIVEN BEES, August delivery, 3s. 6d per lot with Queens; Boxes returnable G.W.R. PULLEN, Ramsbury, Hungerford. 0 11

SPLENDID LOT of EXTRACTED HONEY and SECTIONS; tins returnable G.W.R. PULLEN, Ramsbury, Hungerford. 0 10

FOUR STOCKS of HEALTHY BEES FOR SALE, two in W.B.C. hives, £1 each. Apply, S. HODSON, No. 31, Upper Valley-road, Sheffield. 0 13

DRIVEN BEES.—Not less than 4 lb., 5s. Despatched in rotation and advised. DAVIDSON, Expert, Basingstoke. 0 22

A PRACTICAL BEEKEEPER (married, 27) requires EMPLOYMENT, any capacity; assist in business or fruit Farm. Excellent references. Address, 21, Hubert-road, Selly Oak, Birmingham. 0 18

Editorial, Notices, &c.

CREATING A HONEY MARKET.

SELLING CLASSES FOR HONEY.

The question of creating a market for bee-produce is one that possesses interest for all who are producers of honey in quantity beyond their own requirements; and it seems, therefore, an opportune occasion to invite attention to this matter, when the date draws near for closing entries at two important shows held in London, at which honey selling wholesale is made a special feature. We refer to the two great exhibitions at the Agricultural Hall—first, of the Confectioners' and Allied Trades, on September 6 to 13, and second, that of the Grocers' and Kindred Trades, on the 20th to 27th of the same month. Both these remain open for eight days, and as one of the most important objects is the bringing together of producers and buyers—who are traders—from all parts of the kingdom, an opportunity is afforded for doing business on a large scale, which producers of the various edibles dealt with should not lose sight of.

In order, then, to meet trade requirements, the directors have this year introduced a new feature in the honey section of their schedule, viz., selling-classes for honey by sample. The competition in these classes is not altogether one for the prizes offered, but rather to arrive at a certain *standard* of excellence in quality, which entitles the exhibitor to a certificate of merit. This certificate is a judge's verdict—so to speak—guaranteeing the quality of the samples staged, and buyers are thus assisted by expert opinion when purchasing. In other words, the honey held in bulk by the bee-keeper at home is sold by sample at the Agricultural Hall, an arrangement which must commend itself to buyer and seller alike.

This is what we to-day invite special attention to, and as the entries for the first-named show (the Confectioners') close on the 26th inst., and for the Grocers' four days later (on the 30th), the time is short for thinking the matter over. The list of prizes is the most liberal one offered at any show held during the year, and as honey is none too plentiful for the show-bench in 1902, those who possess good stuff will consult their own interests by writing at once for a schedule.

Nor must we omit to remind readers of the Dairy Show, the entries for which close on September 8. The special attraction for exhibitors at this popular show is the Challenge Cup offered by the British Bee-keepers' Association in commemoration of the Coronation year. This cup will be a valuable one, and needs winning three times before becoming the property of the winner. Full particulars regarding it will be found in the prize list to be had from Mr. W. C. Young, 12, Hanover-square, London.

DEVON BEE-KEEPERS' ASSOCIATION.

ANNUAL SHOW.

The fifth annual exhibition of honey, wax, bees, and appliances was held in conjunction with the exhibition of the St. Thomas Cottage Garden Society, at St. Thomas Pleasure Grounds, Exeter, on August 4.

Owing, doubtless, to the unfavourable season, the exhibits of comb-honey in sections were less numerous than usual. The other classes were well represented; the quality of extracted honey was uniformly excellent, and the wax could hardly be improved upon. Heavy rain during the afternoon caused a small attendance, and prevented operations in the bee-tent. Col. Walker acted as judge, and made the following awards:—

Twelve 1-lb. Sections.—1st, C. Squire, Morte-hoe; 2nd, C. Marks, Kingsbridge; commended, H. Patey, Kingsbridge.

Three Standard or Shallow Frames of Comb Honey for Extracting.—1st, J. B. Houle, Chittlehampton; 2nd, John Seldon; commended, C. Squire.

Single 1-lb. Section.—1st, John Seldon; 2nd, C. Marks; 3rd, J. H. Short, Dunsford.

Twelve 1-lb. Jars Extracted Honey (Light-coloured).—1st, J. B. Houle; 2nd, C. Squire; 3rd, C. Marks; v.h.c., H. Patey; h.c., Mrs. Phillips, Kenton; c., S. Temblett, Andover, Hants.

Twelve 1-lb. Jars Extracted Honey (Medium-coloured).—1st, W. H. Oliver, Exeter; 2nd, R. Furse, Woodbury; 3rd, J. B. Houle; v.h.c., Mrs. Phillips.

Twelve 1-lb. Jars Extracted Honey (Dark-coloured).—1st, Miss M. Pittis, Uplyme; h.c., E. Scholefield, Chudleigh.

Six 1-lb. Jars Granulated Honey.—1st, Mrs. Phillips; 2nd, E. Scholefield.

Beeswax (single block), not less than 1 lb.—1st, C. Squire; 2nd, E. Scholefield; 3rd, J. Seldon; v.h.c., A. G. Preen, Shrewsbury; c., Jno. Berry, Llanrwst, N. Wales.

Display of Honey and Honey Products (weight not over 150 lb).—1st, J. Seldon; 2nd, W. H. Oliver.

Observatory Hive, with Bees and Queen.—Prize, E. E. Scholefield.

Collection of Hives and Appliances.—No exhibit.

Frame-hive made by Amateur Joiner. Member of the D.B.K.A.—V.h.c., W. H. Piper, Sidmouth.—(*Communicated.*)

LEICESTERSHIRE B.K.A.

ANNUAL SHOW.

This Association held its annual exhibition in conjunction with the Abbey Park Flower Show on August 5 and 6. The show as a whole was a very successful one, the number of entries in the honey department being nearly 100, and some excellent samples of produce were staged. Demonstrations in the

bee-tent were given by Mr. W. W. Falkner to highly interested audiences. Mr. H. M. Riley (Leicester) and Mr. R. Brown (Somersham, Hunts) were the judges, and made the following awards :—

Observatory Hive, with Bees and Queen.—1st, A. Beadsmore, Woodhouse Eaves.

Twelve 1-*lb. Sections.*—1st, W. P. Meadows, Syston ; 2nd (equal), J. Waterfield, Kibworth, and H. Smith, Melton.

Twelve 1-*lb. Jars Extracted Honey* (*light*).—1st, W. Wesley, Desford ; 2nd, S. Spray, Melton ; 3rd, Mrs. Smith, Melton ; 4th, J. Orton, Enderby ; h.c., J. G. Payne, Lutterworth.

Twelve 1-*lb. Jars Extracted Honey* (*dark*).—1st, J. W. Drake, Lutterworth ; 2nd, G. J. Levers, Loughboro' ; 3rd, H. Dilworth, Shangton.

Twelve 1-*lb. Jars Granulated Honey.*—1st, H. Dilworth ; 2nd, J. W. Drake.

Display of Honey.—1st, H. Smith ; 2nd, Miss S. J. Cooper, Leicester.

Six 1-*lb. Jars Extracted Honey* (dark), (novices).—1st, E. Shilbourne, Melton ; 2nd, E. Coleman, Oadby.

Six 1-*lb. Sections* (novices).—1st, A. Orton, Enderby ; 2nd, T. H. Geary, Leicester.

Six 1-*lb. Jars Extracted Honey* (light), (novices).—1st, W. Wesley, Desford ; 2nd, A. Orton.

Honey Beverage. — 1st, Mrs. Garner, Waltham ; 2nd, Mrs. Waterfield, Kibworth.

Honey Cake.—1st, Mrs. Waterfield ; 2nd, Miss S. J. Cooper.—(*Communicated.*)

BRISTOL, SOMERSETSHIRE, AND SOUTH GLOUCESTERSHIRE B.K.A.

HONEY SHOW AT CLUTTON.

The above Association held their annual honey show on August 6 in connection with the Clutton and District Flower Show and Industrial Exhibition, and we are pleased to record it as a great success. The honey classes were well filled and the following prizes were awarded :—

Display of Honey.—1st, G. W. Kirby, St. George ; 2nd, Ivan Sheppard, Chewton Mendip ; 3rd, G. H. Caple, Stanton Prior.

Twelve 1-*lb. Jars Extracted Honey.*—1st, S. Temblett, Andover ; 2nd, Jas. Coates, Twerton-on-Avon ; 3rd, G. H. Caple.

Twelve 1-*lb. Sections.*—1st, G. W. Kirby ; 2nd, J. Coates.

Single 1-*lb. Jar Extracted Honey.*—1st, J. Coates ; 2nd, S. Temblett ; 3rd, R. Flower, Hinton Blewitt.

Single 1-*lb. Section.*—1st, J. Coates ; 2nd, G. W. Kirby ; 3rd, A. H. Lyons, East Harptree.

OPEN CLASSES.

Collection of Bee Appliances.—Jas. Brown & Sons, Bristol.

Twelve 1-*lb. Sections.*—1st, G. W. Kirby ; 2nd, Ivan Shepherd.

Twelve 1-*lb. Jars Extracted Honey.*—1st, J. Coates ; 2nd, G. W. Kirby ; 3rd, E. A. Newman.

Three Shallow Frames Comb Honey.—1st, Ivan Sheppard ; 2nd, A. H. Lyons.

Beeswax (3 *lb.*).—1st, R. Flower ; 2nd, C. Newman, Henbury ; 3rd, F. Kirby.

Three 1-*lb. Jars Granulated Honey.*—1st, A. Lockwood, Kingswood ; 2nd, Ivan Sheppard ; 3rd, A. H. Lyons.

LOCAL CLASSES.

Six 1-*lb. Jars Extracted Honey.*—1st, A. H. Lyons ; 2nd, T. Sheppard ; 3rd, G. H. Caple.

Six 1-*lb. Square Jars Extracted Honey.*—1st, T. Sheppard ; 2nd, A. Lockwood ; 3rd, R. Flower.

Display of Honey (*Lady Bee-keepers only*).—1st, Mrs. Walter, Westbury-on-Trym ; 2nd, Mrs. L. S. Kirby, St. George.

NOVICES ONLY.

Three 1-*lb. Sections.*—1st, A. Salmon, Emborow ; 2nd, A. Lockwood ; 3rd, W. A. Standrick, Henbury.

Three 1-*lb. Jars Extracted Honey.*—1st, A. H. Lyons ; 2nd, Montagu Stevens, Stanton Drew ; 3rd, A. Salmon.—(*Communicated.*)

HONEY SHOW AT ALDERLEY EDGE.

The Adlington and District Agricultural Society's Show was held at Alderley Edge (Cheshire) on August 6. Owing to the unfavourable season, the number of honey exhibits was less than in 1901. The Rev. E. Charley, Hon. Secretary, Cheshire B.K.A., officiated as judge, and made the following awards :—

Frame Hive.—1st, W. Cartwright, Moore, Warrington ; 2nd, W. Garner & Son, Oxford-road, Altrincham.

Six 1-*lb. Sections* (open).—1st, W. Woodley, Newbury ; 2nd, W. Ratcliffe, Barthomley ; 3rd, A. Thorpe, Wistaston.

Six 1-*lb. Jars Extracted Honey* (open).—1st, W. Woodley ; 2nd, F. Jennings, Warford ; 3rd. S. Wright, Wilmslow.

Beeswax (open).—1st, J. Berry, Llanrwst ; 2nd, ——— ; 3rd, W. Ratcliffe.

Six Jars of Extracted Honey (district).—1st, S. Wright ; 2nd, T. Smith, Alderley Edge.

Beeswax (district).—1st, S. Wright.—(*Communicated.*)

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of July, 1902, was £5,553.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4858.] The weather since my last notes has not improved for either bee-keepers or farmers;—cold, dull, unsettled days, no sunshine, and therefore no honey. We must hope that the bees of our Northern brethren will do well on the heather and compensate them for the loss of the flower-honey. The season in the North, to judge by the letters I have received, has been worse than in our part of the Kingdom; in some parts of Ireland, too, the wet weather seems to have spoiled the early crop. The hope now is that the "aftermath" will yield some nectar, and so save us from having to feed the bees for winter stores.

Introducing Queens.—I notice a timely article by the veteran, Mr. Doolittle, in last week's B.J. I have proved that both methods given are good ones. I have also introduced queens (virgins too) by taking the queen from hive, then sprinkling the bees with flour from a dredger, and when putting the new queen on top of frames shake the flour dredger over her and she will run below white as a dusty miller. By the time the bees have brushed themselves up smart and trim again the introduction is complete.

All surplus-chambers may now be removed, or the hives cleared, and any sections not sealed should be put through the extractor. This matter renews one's memory of the "wants" of bee-keepers, which I commend to our up-to-date appliance makers. In extracting the honey from late sections, the combs are in many cases only slightly attached to the wood sections, which contain little cushion-shaped lumps of honey, and the force required to extract this breaks the comb away from the sections, and they have to be thrown into the strainer. What we want is a cage for the sections, with a 3 in. square wire projecting to take the bearing of the comb. I have got over this trouble for many years by using pieces of perforated zinc to prevent the comb from breaking away, and am generally successful; but if I could purchase a well-made cage with the parts made to project just $\frac{1}{2}$ in. to $\frac{3}{4}$ in. in the proper place, to save the comb, I would gladly buy one. The cage should be made to take six sections, so that with a full-size extractor six partly-filled sections could be extracted at once. This would also be a very useful appliance for heather-going bee-keepers, who could extract their flower honey and have their sections refilled by the bees with the glorious heather honey our friend, "D. M. M., of Banff," writes so fondly of in last week's B.J.—W. WOODLEY, *Beedon, Newbury.*

BEE-SPACED WOVEN-WIRE DIVIDERS.

[4859.] I have received a note from Mr. John H. Howard in which he says, "Never have I had better finished sections than with the bee-spaced woven-wire dividers this year. There can be no doubt about their utility, and one great feature, other than filling and finish, is that in each of the racks put on, outside sections were the first completed."

This is now the third season Mr. Howard has been experimenting with bee-spaced dividers, and it would appear from the foregoing that he was not quite satisfied with the results he has obtained, and that the principle of the bee space, which provides room for another seam of bees between each row of sections, is a sound one, and an advance on the type of dividers in present use. In face of this evidence, it will be instructive to know if Mr. Howard's experience has been borne out by others who have tried the bee-spaced dividers this season. My own, I regret to say, has been practically nil. I had the dividers on two hives at a distance from home, both of which, unfortunately, swarmed before the sections were finished. We have had a very poor season for honey in this part of Essex; many stocks I have examined have not gone into the supers at all, and, I fear, will not store enough honey to winter on.—W. J. SHEPPARD, Hon. Sec. E. and S.B.K.A. *Chingford, August* 7.

TREATMENT OF VICIOUS BEES.

[4860.] I have frequently seen letters in the BEE JOURNAL from correspondents, who are often beginners, complaining of the vicious tempers of their bees. Five years' experience of bee-keeping inclines me to think that the fault frequently lies rather with the keeper than the bees. We all know that the temper of a colony of bees varies according to the weather, the condition of their stores, and the amount of work they have on hand. If an unsuitable time be selected for manipulations, the bees resent it, and if their owner be timid or inexperienced, they earn for themselves a character which they do not really deserve. With the object of subduing the inmates of the hive, dense volumes of sickening smoke are blown in at the entrance on all subsequent occasions, and the bees are apt with one accord

to exert more than sufficient physical force to fix the bad impression the bee-keeper had formed of them. In my second years' bee-keeping I bought a small apiary, but before the summer was far advanced I came to the conclusion that I had come into possession of an army of "tartars." They seemed disinclined to brook interference, and the more smoke I gave them the worse they became. One day I lifted the quilts off very gently. There was no angry buzz, and by discarding the smoker as a subjugator, and using it merely as a gentle driver, I was able to do anything with the stocks. I now rarely use smoke except to drive the bees below the excluder, so as to avoid crushing them when putting on supers. I have overhauled four hives in succession in this way without getting a sting. When a young apiarist's charges become unruly and he loses nerve, the best thing is to cover up at once, and try again another day.

Extreme gentleness in manipulation and slow movements, especially of the hands, about the hive are of supreme importance in the management of vicious bees. I hope my method will be tried with the bees which formed the subject of complaint a few weeks ago, and that they may yet be spared the brimstone pit.—C. H. H., *Watford, August* 9.

TRANSFERRING BEES FROM SKEPS.

[4861.] I notice you are continually asked for advice *re* the above, and, reading article No. 4842, on page 294, I thought it might cause doubt in some minds as to the efficiency of the "fourth plan" mentioned by Mr. van Eeden. In recent years I have transferred some dozen stocks in this way, and have had no failures. This year I only had one skep to do, but it was done so well—in my estimation—that it may encourage some readers to hear how allowing the bees to transfer themselves works out in practice.

As this was a backward year I commenced operations later than usual, giving them ten frames—five of comb and five of half sheets of foundation—and after a time driving bees and putting on queen-excluder. Early on June 28 I was surprised to find the bees hanging out ready to swarm, so I went to work to prevent them. I got a body box ready as super, with twelve standard frames of foundation—half sheets—removed skep, which was heavy, but not full, and took out every frame below to cut out queen-cells, but could not find any, so put back alternate frames of comb and foundation, supered with body-box arranged in the same way, and replaced skep on top.

Last week I took off skep, which, in spite of very old combs, produced 13½ lb. of run honey, and they still have twenty-two frames quite full of brood and honey.

I may add that I have a "Wells'" hive which wanted to swarm, and I checked them in the same way, and they now have forty-eight standard frames and forty-two sections all full. These extra frames will be very useful for driven bees which I shall have in a week or two.—E. E. J. E., *Oxford, August* 6.

LEAVING ON SUPERS ALL WINTER.

[4862] On seeing the illustration in B.B.J. of July 31 of bees wintering on exposed combs, the idea struck me that they must be a hardier little insect than generally depicted. On that basis, I have formed a plan for wintering mine, but before undertaking it I should like your advice, if you will kindly give it, with regard to my plan. I propose to leave the shallow-frame supers on all my hives through the winter. I also intend to feed up the stocks on top of these, and let the bees store the food either there or in body-box. Seeing that they have not drawn all the foundation out in the supers, this may be an inducement for them to do so. Then, again, as I have not much convenience for stowing away the supers, they will be out of the way until spring, and I shall not have to provide winter passages. Also would it not give the queen more space below, so that she could continue breeding later on in the year than if all stores and bees were suddenly compressed into the body-box?—R. H. CHADWICK, *Southport, August* 11.

[The plan of leaving supers above brood-nests for the winter is not new; we practised it over twenty years ago in our own apiary, under certain conditions desirable at the time, and found the bees winter very well indeed when so dealt with. We will be glad to know later on how it succeeds in your case.—EDS.]

BEES AND POTATO BLOSSOM.

SOME OLD-TIME REMINISCENCES.

[4863.] This part of the country is filled with the scent of the potato bloom. I enclose you sample. I had no idea the blossom of the potato gave out such a sweet scent. I thought it was the white clover at first, of which there is still a good deal in bloom about here, but I found it was not so. Why I write you is to ask if you could tell me whether it is of any use to bees. I have looked, but have never seen any, but the fields are of such large extent and not many bees kept about here. I have been a bee-keeper nearly sixty years. I started with skeps in Cumberland, near the moors. We used to "clog" the hives for surplus; that is, put another skep under the old or parent stock, but more often destroy the surplus swarms with sulphur. About the year '45, I remember, the wooden "Nutts" hive came out—brood-box in centre and two store-boxes, one at each side, and bell-glass over centre of brood-box. I got a large quantity of honey out of this hive one season—I believe about 150 lb. Then for about forty years I lived in towns, so had to give up

bee-keeping; but this last seven years I have lived in the country, and took to my old hobby again. I have twelve hives, but I can only get a bumper crop from one. I got last season from it 121 lb. in sections; this year I shall only get about 80 lb. from the same hive. All my others have swarmed, and I shall not have above 30 lb. from the best, and some of them none. I have prevented swarming in this one good hive by covering the hive with mats, and soaking them with a watering can two or three times a day. It is astonishing what an effect a cold douche has on bees when they are nearly mad with heat during the hottest part of the day. There is no doubt also that when a hive of bees goes in for "storing" for one season they get the knack of it. As it was, it took all my spare time and water to keep this one cool during that four days very hot weather three weeks ago.

A pipe running the whole length of the hives with a rose attached to a branch opposite every hive, and a tap to each, all connected to an elevated tub would be a very simple plan of cooling any hive when required. The idea is not new. A lady, Mrs. Crossfield, an apiarist about here, told me her grandmother used wet cloths to put over her skeps to prevent swarming.—J. PALEY, *Kirkham, August* 8.

WEST MALVERN AS A BEE DISTRICT.

[4864.] Referring to Mr. W. Herrod's inquiry in B.B.J. of July 31 (page 310) as to West Malvern as a suitable place for bee-keeping. I took a cycle run round the locality yesterday, and my impression from the nature of the flora and general surroundings was favourable. I called later in the day on a member of our association residing in Colwall (some two miles distant), and he said his bees always did well.

Fruit plantations yield a spring supply of honey, followed by a moderate amount of white clover, and limes closing the season. I thought this might be helpful to your correspondent in case no one else replied.—JAMES G. GODWIN, hon. secretary Hereford B.K.A., *Withington, August* 5.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, D.SC., F.R.M.S., F.Z.S., F.E.S., ETC.

Deutsche Illustrirte Bienen-Zeitung.—Frederick the Great was a zealous promoter of bee-keeping. He gave orders that the clergy, all institutions and abbeys, as well as the tenants of the Royal domains, should keep a certain proportion of bee-hives. Each tenant paying a rent over 150 thalers (£22 10s.) should keep ten, and the others at least twenty, hives of bees, or pay a fine of 15s. for each missing hive. In neighbourhoods where there was sufficient bee-pasture, each peasant farmer had to keep one or two hives or pay a fine. But, on the other hand, if any one could show more than ten hives they received a reward for each.

Bee-keepers from other parts were invited to settle and spread the knowledge of apiculture. Robbing the stocks was punished with from one to three years' imprisonment, and if any one attempted to poison the bees they were liable to six years' hard labour.

The results of this fostering care were soon evident. Frederick wrote to Voltaire, "We have increased the number of bee-hives by a third part in this year."

Leipziger Bienen-Zeitung.—I have often seen it questioned by bee-keepers whether the queen of a hive that had just swarmed herself kills her rivals, or whether the workers do away with the superfluous queens? On June 26 this year I had a Carniolan stock which swarmed for the third time this season, and after the swarm had left there was a loud, buzzing of drones. I went closer, and saw a queen before the entrance. At that moment another queen advanced from the hive in an excited manner and stung the other queen twice with great virulence. The injured queen was quite quiet and made no resistance. After the deed the murderess returned to the hive, followed slowly by her victim.

There can be no question as to the truth of this observation.

Bulletin de la Société d'Apiculture de la Somme.—Visiting my hives in October, some of the supers were full of bees; one I found had not a single bee in the super. On examining the body of the hive, some of the bees fell on to the grass at the side. I sent a few good puffs of smoke over them, and they went up to the entrance of the hive. I thought the matter ended. A month later, towards the end of November, walking in front of these hives, I noticed quite a swarm of bees under the same hive. I thought of what had occurred the month before, and thought it likely the queen had fallen on the grass and had not returned to the hive; that she had taken up her abode underneath, and that all the bees had joined her there. On examining the hive there were only a few bees to be seen there in search of honey.

Taking necessary precautions, we hived this "St. Catherine's Swarm." It was difficult to disconnect it, for the bees had built four beautiful combs and had warehoused three to four pounds of honey, of which the greater part was sealed. The bees had fetched this honey from their hive that they might be provided with provisions in their new abode.

Schweizerische B. Zeitung.—Austria has more hives than any other European State—more than 1,500,000. Then follows Germany, with 1,450,000; France, with 950,000;

Holland, 240,000; Belgium, 200,000; Russia, 110,000; Denmark, with 90,000; and Greece, 30,000 hives of bees.

Leipziger Bienen-Zeitung.—In the public gardens here (Drosedow) a swarm of bees took possession of a wild cherry tree. I knew nothing of this, but one day I was told that there were bees in the gardens, so, having just lost a swarm, I set off with all needful appliances, and proceeded to the seat of action. All efforts were, however, useless; the bees could not be got out.

At last in the next winter, in a very hard frost, the tree was felled; the farmer who rented the land had, to my surprise, given it to me.

The workmen cut right into the bees. Many were killed, others fled out and perished on the snow. The frightened workmen immediately blocked the large opening with a great whisp of straw, which broke down the combs, and in this condition the log, with the bees, passed into my hands.

In the following summer they recovered, and in autumn were transferred to a skep, while their tree stem was transformed into a five-story hive, with movable frames six deep. In March this year the bees were flying and working with energy, and in May they were restored to their modernised dwelling.

The Same.—Every year when the acacia blossom—the finest and best of all honey-yielding plants—is over, those bee-keepers who are favoured in having acacias near their hives are apt to wish that there could be a second acacia harvest in the late summer just when the colonies are strongest. Just such a plant seems to be the *Sophora japonica*. A bee-keeper from Budapest writes that in that district there are many of these trees which flower towards the autumn, and yield great quantities of honey. Though the much recommended phazelia is capable of greatly improving the honey yield, this plant cannot be compared with the rich harvest of the acacia, and the *Sophora japonica* excels even the acacia. Herr Otto Schultz, Buckow, intends to make a nursery for the young trees of the sophora, so that the tree may be more widely known and planted.

BRIEF REPORTS.

HERTFORDSHIRE.

In response to Mr. Woodley's appeal on page 313 for brief reports on honey crop, it gives me pleasure to send a brief report of the progress of bees in this district. For myself, I can say that stocks not swarmed have done fairly well—not quite up to the average—and taking the apiary through, and those I attend to, and the reports I have to hand from local bee-keepers, the "take" is about three-fifths of last year. The quality is very good—no dark honey—and the price has risen 1s. per dozen, wholesale and retail, and have to refuse many orders at that. Sections are very scarce. I shall be judging at local shows shortly, and will report later as to quality. You can publish this, and it may encourage others to cheer up.—ARTHUR E. FORD, *Hemel Hempstead, August* 10.

SOMERSETSHIRE.

I regret to say our crop is almost a failure. Swarms the rule. Honey the exception. What little honey has been got is mixed with that confounded honey-dew. We have had only one real good season here for the last five years. Only three weeks of good bee weather this summer. Swarms almost starving, though heather and clover abundant.—WORKER BEE, *Langford, August* 11.

CAMBRIDGESHIRE.

I have had a bumping crop of honey. Weather just right since June 27. Clover, mustard, and limes yielded well in their turn. —H. T. WRIGHT, *March, August* 7.

Queries and Replies.

[2945.] *Theoretical* v. *Practical Bee-keeping.* —I have just commenced to keep bees, and have made myself acquainted with several of the text-books recommended to bee-keepers, including the "Guide Book," by T. W. Cowan. I have also read with much interest the weekly numbers of the B.B.J., and am ordering the *Record*. I find myself sufficiently "up in theory," but decidedly "down in practice." I am also very desirous of managing my own bees single-handed, as I know, from the answers to correspondents in your papers, that this district is reeking with foul brood; and, from my own somewhat extensive experience of micro-organisms, how easy it would be for a bee-expert visiting many hives in succession to spread infection and nullify all preventive effects. One of the greatest difficulties I have to contend with is to decide which of two diametrically opposed opinions I ought to follow, *e.g.*, to go in for hybrid bees or pure bred bees. The special advantage which your opinions have for me is that they, unlike those of bee-keepers in the trade, are quite disinterested. I have commenced with one hive bought from a well-known dealer, and the bees have, so far as I can judge, done very well. 1. I should like to know whether these bees are pure bred or hybrids, and should be much obliged if you would kindly examine the drone and worker-bee sent herewith and give me your opinion? 2. At same time, it would be of service to me if you could give a reference to the best standard work (English, French, or German) dealing with the distinctive characters of the various varieties (or species) of the honey-bee. 3. I am sending with same enclosure a larva of a number (eight or nine) which have been

cast out of the hive during the last few days. Is the blackening due to *chilled brood*, or may it possibly represent the stage reached by larva when the foul brood is checked in its development by the presence of carbolic acid and naphthaline? My bees are very warmly wrapped up, but the sides of the hive are single-walled, and thus, I suppose, chilling of the brood may take place. I may add that I picked up the drone alive and healthy and killed it with chloroform. The worker-bee was being carried out, dead, and owing to the wind the load proved too heavy a one. To my surprise, the worker appears to be a young one, and not like other workers that I have seen carried out in small numbers before. Perhaps you will not mind saying whether the bee is a young or old one; and, if young, whether it is not unusual for an apparently healthy and young bee to be carried out in this way? 4. May I trouble you with one more query? The Virginian creeper—chiefly *Ampelopsis Veitchii*—is very abundant here. I have seen the bees work it in hundreds on my own house in past years. Do they gather honey from it? If so, is the honey of good quality? I have very many queries which I should like to add, but I must forbear.—A. H. Trow, D.Sc.

Reply.—1. The drone is a hybrid, but the worker-bee shows no markings at all beyond that of a common brown bee. 2. There is no book, to our knowledge, that deals specially with the distinctive features of the different varieties of bees, or does more than describe the special characteristics, as is done in the "Guide Book." 3. The shrivelled-up larva sent is merely "chilled," and—as is usual—cast out by the bees. 4. None of the varieties of Virginian creeper are classed as honey-producing plants.

[2946.] *Foul-brood Remedies.*—The three pieces of comb sent by post were taken from a hive, the owner of which placed naphthaline in it a fortnight ago that he *got at a local chemist's*. He also used formalin two days ago. The owner of the hive told me that on the evening after using formalin the bees seemed very excited, and many left the hive. On examining the frames yesterday I found five frames of brood all nearly chilled; only very few bees left alive, and the stock queenless. Now, will you please say in Bee Journal if there is foul brood in any of the combs sent? In some of the cells you will notice the larvæ is discoloured. Do you think the mischief can have been caused by the use of too strong disinfectants? Kindly let me know, also, where I can get the Bee Journal for 1900 bound or unbound, and also state price?—T. U., *Kilkenny*.

Reply.—Your samples reached this office after hours on Saturday the 2nd inst, and as Monday, the 4th, was a closed day for ordinary business in London, the combs were not seen till the 5th. The very small samples sent were not suitable for diagnosing the case by, seeing that the cells containing a very few unsealed larvæ had been probed before despatching. We saw enough, however, to make us fairly certain that foul brood is developing slightly. The bulk of the brood is "chilled," a result probably brought about by the bees being driven from the combs by the formalin used. The same may also have caused the queen to leave the hive, and perhaps perish outside. Hence queenlessness.

[2947.] *Insect Nomenclature.*—Can you tell me what insect? The enclosed bit of tiny comb containing sealed brood was found on a gooseberry bush, and hung on the branch just in the same way that bees build their combs. It was brought to me to see if I knew what insects the comb was built by, but, as I have never seen anything like it before, I thought perhaps you could enlighten us in the B.B.J.—A. C., *Bourton-on-the-Water*.

Reply.—We forwarded the comb to Mr. F. W. L. Sladen, who kindly writes as follows regarding it:—"The 'comb' sent consists of a minute bunch of cylindrical cocoons. Each cocoon is only one-eighth of an inch in length, and contains a living and partly-matured pupa of an insect. I have placed the cells in a place favourable for the development and emergence of the insects, and, if this takes place, I hope to be able to send you the name of the insects, with any notes on their habits that I can obtain.—F. W. L. Sladen."

[2948.] *Bees Starving in July.*—The hive from which sample of comb sent was taken is one of three which had reached the verge of starvation in mid-July, so scarce is honey this year in this locality. It looks to me as though the bees had been unable to maintain the necessary heat to hatch the brood, and to feed those which were hatching, as many have died with their heads and tongues protruding. The sample is taken from the centre of one comb, but in most of the combs affected, the brood round the outside of the cluster has suffered. I shall be sorry if it is disease, but I will not be surprised, as a stock has died out only a mile from here through foul brood. Since I commenced feeding and treating for the above, two of the queens have recommenced laying, and the young larvæ looks well and healthy, while the bees are actively engaged pulling out the dead from the combs.—X. Y. Z., *Midlothian*.

Reply.—The brood in comb sent is chilled only; there is no disease.

[2949.] *Dividing Stocks for Increase.—Loss of Queens.*—Early in July I divided the bees in a frame hive to save swarming, taking the queen, with three frames of brood, &c., and brushing bees from two other frames into new hive. All is going on well in the latter. In the old hive I found nine queen-cells a week after division, all of which appeared to have hatched out, but no queen could be found.

They formed a further seven queen-cells, and healthy grubs were seen in each before being sealed over. These have since hatched out, but though I have searched for a queen I cannot find one, and to all appearance the hive is queenless. Will you inform me :—1. If young queens are similar to the old ones? 2. Is it usual for things as I have detailed above to happen in healthy hives? 3. Do the bees destroy surplus queens? There are a large quantity of drones in the hive. A reply in next issue will oblige.—J. F., *Doncaster, August 7.*

REPLY.—1. The only difference in a young queen is her less matronly look, but an old queen has less hairiness or pubescence about the thorax and abdomen by reason of the hairs getting worn off with age. 2. We should think yours a very exceptional case, judging by details given. 3. Yes.

Echoes from the Hives.

Watford, Herts, August 9.—Through the lack of a suitable place in which to keep bees, this season I have only had one colony. I worked it up in the spring, and placed a super over the brood nest on May 25. The bees accepted the additional room immediately, but owing to the unsuitable weather, they only gathered a little over 30 lb. of honey. The queen has done splendidly, and with a good season this take would have been exceeded.—C. H. H.

Bee Shows to Come.

August 14, at Goole.—Bee and honey show in connection with the Goole and District Agricultural Society.

August 15 and 16, at Dumfries.—Open Honey Show, with Gold and Silver Medals and a handsome Silver Cup, among other liberal prizes.

August 16, at Ammanford (S. Wales).—Honey Show in connection with the Ammanford Flower Show.

August, 16, at Endmoor, in connection with Flower Show. Open classes for comb and extracted honey.

August 20 and 21, at Shrewsbury.—Annual Show of the Shropshire B.K.A., in connection with the Shropshire Horticultural Society's Great Floral Fete in "The Quarry." Bees, Honey, Hives, and Appliances.

August 23, at Barnton, Northwich.—Honey Show in connection with the Flower Show. Honey department—Seven local classes and one class (open to all Cheshire) for twelve 1-lb. jars "light" honey. The Cheshire B.K.A. bronze medal goes to the winner of first prize in this class. Schedules from Mr. S. Wade, Hon. Sec., Barnton, Northwich. **Entries close August 16.**

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax.

August 26, at Cartmel, Lancs.—Honey show in connection with the annual show of the Cartmel Agricultural Society. Open classes for Six Sections and for Six 1-lb. Jars Extracted Honey; also for beeswax in cakes for domestic use. Special prizes for members of the Lancashire B.K.A. and for county bee-keepers. Schedules from Wm. Cragg, secretary, Cartmel. **Entries close August 16.**

August 27, at Reading.—Honey show of the Berks B.K.A., in connection with the Reading Horticultural Society. Open to Berks only. Schedules and all particulars from D. W. Bishop Ackerman, Hon. Sec. Berks B.K.A. **Entries close August 23.**

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 27 and 28, at Uttoxeter.—Bee and Honey Show in connection with the Annual Show of the Staffordshire Agricultural Society.

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition. Two open classes for six's, sections, and extracted. Prizes 10s., 5s., and 2s. 6d. Schedules from W. U. Jones, Secretary, Church Bank, Montgomery. **Entries close August 21.**

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax. Schedules from Frank Little, Llangollen. **Entries close August 14.**

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society.

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 10 and 11, in Waverley Market, Cainburgh—Midlothian Bee-Keepers' Ninth Exhibition. Seven open classes. Prize money, 12s., 8s., 4s. Entry 2s. Schedules from W. Weir, Heriot, Midlothian. **Entries close September 3.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath. **Entries close September 1.**

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 30.**

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. (Open to Northumberland and Durham only.) Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close Sept. 8.**

PRESS CUTTING.

A SWARM COMES DOWN THE CHIMNEY.

A remarkable incident occurred at Downham, Lancashire, yesterday morning, a large swarm of bees coming down the chimney into the upper room of one of the dwelling-houses, apparently in search of their queen. The room door was closed, and the windows opened, and the assistance of a local bee-keeper obtained, but there had been no evacuation last night. The incident has caused quite a sensation in the village.—*Lancashire Post*, June 26.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** *Ancient Bee-Books.*—Referring to the inquiry on page 278 of our issue for July 10, Colonel Walker, of South Devon—the "competent authority" we had in mind—has been good enough to send us the following particulars with regard to the market value of the book in question. He writes:—"As to the value of Butler's *Feminin Monarchi*, 1634; that is the phonetic edition, and as such possesses an interest for readers and collectors outside the circle of bee-men. It is, in consequence, elevated to the dignity of being sold as a separate item at public auctions, where it usually fetches from 21s. to 42s., according to its condition. Quaritch recently had a copy for sale at £4. A middling copy would cost, as a rule, about 24s. from a bookseller."

*** A CORRESPONDENT, dating from Manchester, August 5, writes:—"I should esteem it a great favour if you would in your next issue ask some of your subscribers to kindly, on a post-card, advise me if they know of any good heather forage for bees near Macclesfield? I have heard of Cheshire bee-men taking stocks to Hayfield, but going there an hour or two yesterday afternoon, I did not discover any good spot for them."

E. M. D. P. (Barnstaple).—*Honey Extractors.*—An efficient machine suitable for a small apiary may be had for about 15s. to 21s. Any of our leading advertisers will supply them at prices quoted.

"A BEGINNER" (Bucks).—*Full Sheets or Starters Only, Which?*—1. The question of using full sheets or "starters" only of foundation for swarms is simply a matter of choice; either will answer the purpose of insuring straight combs in frames, and that is *the essential* point, whatever may be said by the "lecturer" you refer to. Nor does the "Guide Book" confirm the lecturer's views as you state. In the chapter on "Hiving Bees" (page 21) the instructions are to use either full sheets of foundation wired, or strips 1 in. or more in depth known as "starters." 2. With regard to the swarms—hived in June—not working, the fact of the bees not being able to build out all the combs in brood-chamber, as stated, obviously furnishes the reply, and shows that June was a very poor month for bees. We cannot quite understand your mention of "nine frames full of brood and honey" in view of the inquiry, "When ought I to put in whole sheets, now or in spring?"

"BEGINNER" (Portadown).—*Bees Killing off Drones.*—1. Your mention of having "put two skeps into bar-frames," is too indefinite for us to quite make out whether the combs and bees have been transferred, or the skeps placed above the frame-hives in order that the bees might transfer themselves. 2. The killing off drones and "casting out drone grubs" in one lot, simply indicates the stoppage of income, and the desire of the bees to do away with useless consumers of their stores.

J. B. P. (Darlington).—*Aborted Bees Cast Out.*—The fully-formed but wingless bees owe their deformity to untoward conditions during the process of hatching,; *i.e.*, insufficient warmth for proper development of the insect when in the chrysalis stage.

THOS. WALKER (Glos).—We cannot undertake post replies to queries, the labour would be altogether too great. Your query was answered last week on page 320.

J. C. (Weston-super-Mare).—*Varieties of Heathers.*—1. The three samples are respectively as follows:—No. 1, *Erica* or *Calluna vulgaris* (common ling); No. 2, *Erica cinerea*, or bell heather; No. 3, *Erica tetralix*, or cross-leaved heath. These

heathers are fully described and illustrated on page 327 of B.J. for August 15, last year. 2. The Hon. Secretary of the Bristol and Somerset B.K.A. is Mr. Jas. Brown, Messrs. Brown & Sons, Seedsmen, Bristol.

"AMATEUR" (Leek).—*Sour Mead for Making Honey-Vinegar.*—We should not think that honey-vinegar made from sour mead would be fit for use, as good honey-vinegar requires far more care in the making than mead.

G. L. (Cowling).—*Queen Cast Out.*—The dead queen was too hard and dry for *post mortem* examination, but from the appearance it seems to have been a case of "balling." The shape of dead insect is that of a virgin queen, and evidently a hybrid.

H. C. (Coventry).—*Experts' Certificates.*—For particulars regarding syllabus of examinations for these apply to Mr. E. H. Young, Sec. B B.K.A , 12, Hanover-square, London.

T. H. T. (Cornwall.)—*Value of Driven Bees.*—There can be no question of the value of ten or twelve stocks of bees to be had gratis for the trouble of driving. But we doubt very much whether you would make a success of the task, seeing that you are entirely inexperienced and ask us to give you full directions for driving, uniting, and after treatment. With regard to the latter items you had best read the "Guide Book" which gives the needful particulars, and for the rest we advise you to get the help of some bee-man accustomed to the work, or some serious trouble may follow your first attempt at bee-driving on a large scale.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

J. M. (co. Down).—Foul brood is rapidly developing in comb, but as the case is probably not of old standing, it hardly calls for the most drastic measures. The bees may be saved, and if strengthened by a stock of driven bees in treating as a swarm, all may go on well in a clean hive with proper treatment preparatory to packing down for winter.

W. W. (Wisbech).—There is foul brood in both samples.

F. HAMSHAR.—Both samples show signs of foul brood in the incipient stage. Being a recent outbreak, the empty sections may be used again.

R. C. L. (High Barnet).—Comb contains only pollen and honey (or food). We do not see any brood at all in cells. Can you not cut 1 in. square of unsealed brood and send it on?

(MISS) C. M. B. (Horsham).—The "black appearance" in comb referred to is merely due to the cells having had brood reared in them. There is no trace of brood now in cells. The honey had run out of box and was sent on by post-office in official envelope as "found damaged in post" to you. Liquid honey should not be sent unless safely packed.

R. T. (Minchinhampton).—There is foul brood of such a bad type in comb that we advise total destruction of bees and combs.

Honey Samples.

J. W. P. (Walthamstow).—Both samples are fairly good. No. 1 better of the two, and might do for show-bench, if not too keen a competition.

G. H. (Cambs).—The honey is beginning to granulate and would need warming carefully to clear it for the show-bench. It is of good quality and quite suitable for a local show.

*** *Some Queries are unavoidably held over for reply till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

WANTED, any quantity BEESWAX. Good price given. ROSS, Barkerland House, Dumfries. 0 37

1 CWT. of OLD HONEY, in two tins, 50s. E. HOLDER, Grosvenor Cottage, Bath. 0 36

HEALTHY DRIVEN BEES, 1s. 3d. per lb., not less than 4 lb. (Boxes to be returned.) E. LONG, Fulbourn, Cambs. 0 34

DRIVEN BEES.—Strong STOCKS, with Queens, 5s. Package returnable. PHILLIPS, Spetchley, Worcester. 0 35

SIX strong STOCKS of BEES, with or without Hives, all on Standard Frames. JOHN BROOKFIELD, Gardener, 108, Stamford-road, Birkdale, Southport. 0 38

OWEN BROWNING, Ashley, wishes to notify that he cannot take more orders for honey this season. Limited quantity Driven Bees ready after 20th inst., 1s. 3d. per lb. 0 33

DRIVEN BEES, guaranteed healthy (apiary established 25 years), with 1902 fertile Queens, strong lots, 5s., on rail; Selected Queens, 2s. 6d.; Bees, with 1901 Queen, 4s. EXPERT, *Bee Journal* Office. 0 29

NEW SECTIONS WANTED, best quality. T. SMITH, 17, Cambridge-street, Hyde Park. N 63

WANTED, NEW SECTIONS (first quality). State lowest for cash. CHILTON, Polegate, Sussex.

HEALTHY DRIVEN BEES with Queen, 5s. lot. Boxes returned. A. MORETON, Bee Expert, Leigh, Worcester. 0 20

SECTIONS and EXTRACTED HONEY WANTED (best quality Sainfoin or Clover). Mention price. F. SLADEN, Ripple Court Apiary, Dover. 0 12

DRIVEN BEES, August delivery, 3s. 6d per lot with Queens; Boxes returnable G.W.R. PULLEN, Ramsbury, Hungerford. 0 11

SPLENDID LOT of EXTRACTED HONEY and SECTIONS; tins returnable G.W.R. PULLEN, Ramsbury, Hungerford. 0 10

Editorial, Notices, &c.

HANTS AND ISLE OF WIGHT B.K.A.

SWANMORE BRANCH.

The annual show of above branch was held on July 30, at Bishops Waltham, in connection with that of the Bishops Waltham Horticultural Society. The season began unfavourably, but finished up well, and it is probable that the supply of honey will not be much below the average. Mr. E. H. Bellairs judged the honey, and made the following awards :—

Twelve 1-*lb. Sections.* — 1st, E. Ainsley ; 2nd, W. G. Hedges ; 3rd, E. Hedges.

Six 1-*lb. Sections.*—1st, E. Ainsley ; 2nd, A. Royds, Jr. ; 3rd, W. Cooper ; c., E. Hedges.

Three 1-*lb. Sections.*—Equal firsts, E. Ainsley and A. Royds, Jr. ; 2nd, Miss Martin.

Single 1-*lb. Section.*—1st, E. Ainsley ; 2nd, Miss Martin ; 3rd, W. Cooper.

Three 1-*lb. Sections* (novices).—1st, Miss Nessie Martin ; 2nd, W. King.

Display of Honey.—1st, W. G. Hedges ; 2nd, C. T. Hedges ; 3rd, Ernest Hedges.

Twelve 1-*lb. Jars Extracted Honey* (*light*). —1st, E. Ainsley ; 2nd, F. Sandell ; 3rd, E. Hedges.

Twelve 1-*lb. Jars Extracted Honey* (*dark*). —1st, E. Ainsley.

Six 1-*lb. Sections and Six* 1-*lb. Jars.*—Equal firsts, E. Ainsley and F. Sandell ; 2nd, W. G. Hedges.

Three 1-*lb. Section and Three* 1-*lb. Jars.*—1st, E. Ainsley ; 2nd, F. Sandell ; 3rd, E. Hedges.

Single Section and Single Jar.—1st, F. Sandell ; 2nd, E. Ainsley.

Three 1-*lb. Jars Granulated Honey.*—1st, F. Sparksman ; 2nd, W. Cooper.

Two Shallow Frames Comb Honey.—1st, C. T. Hedges ; 2nd, W. G. Hedges ; 3rd, E. Hedges.

Twelve 1-*lb. in Sections and Twelve* 1-*lb. Jars Extracted Honey* (members only).—1st, E. Ainsley ; 2nd, E. Hedges ; 3rd, W. G. Hedges.

Wasps' Nest.—1st, W. G. Hedges ; 2nd, F. Garnett.

Bell Glass Super (weighing 45 lb.) shown by W. G. Hedges was highly commended.—(*Communicated.*)

EAST KENT HONEY SHOW.

The first show was held at Wye on August 13 in connection with the local Horticultural Show. Lord Stanhope (Lord-Lieutenant of Kent), Mr. Laurence Hardy, M.P., and Mr. Edward Ascherson kindly extended their patronage thereto.

A total of nearly seventy entries were received for the seven classes, the competition in the classes for sections and extracted honey being particularly keen.

Considering the season, which has been far from propitious for bee-keepers, the show was a distinct success.

The Rev. J. H. Carr, Rector of Adisham, judged the exhibits and made the following awards :—

OPEN TO EAST KENT ONLY.

Six 1-*lb. Sections.*—1st, South-Eastern Agricultural College, Wye ; 2nd, E. R. Nash, Smarden ; 3rd, T. Head, Canterbury ; 4th, G. Bishopp, Lydd.

Two Shallow Frames Comb Honey.—1st, E. R. Nash ; 2nd, Rev. F. N. Style, Pluckley ; 3rd, G. Alexander, Ashford ; 4th, S. Darlington, Charing.

Six 1-*lb. Jars Extracted Honey.*—1st, E. R. Nash ; 2nd, S. Darlington ; 3rd, T. Knight, Elham ; 4th, W. Hills, Kennington.

Super of Honey.—1st, J. Chittenden, Wye ; 2nd, H. C. Dodd, Wye ; 3rd, W. Hills.

Beeswax.—1st, G. Bishopp ; 2nd, Miss S. Amos, Wye ; 3rd, T. Head ; 4th, Miss H. McGregor, Wye.

Trophy of Bee-Products.—1st, South-Eastern Agricultural College ; 2nd, J. D. Tappenden, Ashford ; 3rd, T. Dodd, Wye.

Skep of Honey (skeppists only).—1st, G. Collins, Kennington ; 2nd, J. Maxted, Little Chart ; 3rd, H. Reynolds, Wye.

Mr. Jesse Garratt during the day gave interesting demonstrations and lectures in the Kent County Council bee-tent.—J. Tippen, Hon. Sec.

HONEY SHOW AT BRADFORD ABBAS.

The tenth annual show under the auspices of the Yetminster District B.K.A. was held on August 13 in wretched weather, on the Vicarage Lawn, by kind invitation of Miss Hatfield.

The entries were numerous, notwithstanding the bad season, and the quality was exceptionally good in all classes.

Mr. Brown, of Maiden Newton, and Mr. Stacey, of Merriott, officiated as judges, and made the following awards :—

MEMBERS ONLY.

Standard Frame of Comb Honey.—1st, J. Batten, Thornford ; 2nd, J. Andrews, Thornford ; 3rd, F. Trott, Leigh ; 4th, E. Higgins, Bradford Abbas.

Shallow Frame of Comb Honey.—1st, G. Leeding, Bradford Abbas ; 2nd, F. Trott ; 3rd, A. Buckland, Thornford ; 4th, W. Lang, Bradford Abbas.

Six 1-*lb. Sections.*—1st, F. Trott ; 2nd, T. Banger, Leigh ; 3rd, Miss A. M. Ffooks, Leigh ; 4th, G. Leeding.

Bell Glass (*over* 10 *lb.*).—1st, G. Leeding ; 2nd, J. Andrews ; 3rd, W. Lang.

Bell Glass (*under* 10 *lb.*).—1st, G. Leeding ; 2nd, C. Smith, Wyke ; 3rd, G. Andrews.

Twelve 1-*lb. Jars Extracted Honey* (*light*).—1st, F. Trott; 2nd, T. Banger; 3rd, C. Smith; 4th, J. Andrews.

Twelve 1-*lb. Jars Extracted Honey* (*dark*).—1st, J. Andrews; 2nd, T. Gabe, Thornford; 3rd, E. Higgins; 4th, G. Leeding.

Beeswax.—1st, G. Leeding; 2nd, F. Trott; 3rd, T. Bishop, Bradford Abbas; 4th, C. Smith.

Honey Trophy.—1st, C. Smith.

Honey Trophy (open to previous winners only).—1st, G. Leeding; 2nd, F. Trott.

Six 1-*lb. Jars Extracted Honey.*—1st, J. Andrews; 2nd W. Lang.

OPEN CLASSES.

Single 1-*lb. Jar Extracted Honey* (*light*).—1st, Miss D. Edwards, Broughton, Hants; 2nd, S. Temblett, Andover, Hants; 3rd, H. Goodsell, Biddenden, Kent.

Single 1-*lb. Jar Extracted Honey* (*dark*).—1st, C. Smith, Wyke, Dorset; 2nd, F. Trott, Leigh, Dorset.

Collection of Bee Flowers.—1st, E. Higgins, Bradford Abbas; 2nd, Miss Hilda Leeding, Bradford Abbas.

An interesting feature was the bee-driving competition. Mr. H. M. Tilley, County Council Instructor, adjudicated and awarded the prizes as follows:—1st, T. Bishop; 2nd, G. Leeding; 3rd, E. Higgins.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

COMMENTS ON CURRENT TOPICS.

[4865.] *Heather and Weather.*—Last year I noted that the heather was in bloom on July 15, and bees were working actively on it from the 20th onward. This year no single floret has opened on the corresponding date of August—a full month later than last year. Shepherds and gamekeepers predict a poor bloom, and as the season is so far gone, the prospects are not at present bright, for up to date not a single ounce of surplus honey has been consigned to the supers of any of my hives. If they gather as much as will save feeding I shall be very thankful. Bees scarcely ever looked outside from the beginning of August until the 13th, when they had a very busy day. Dull leaden skies have hid the sun, cold east winds have prevailed, and chilling showers have soured the plants, while a continuous low temperature has soured the bees, and kept them indoors.

Excellent Advice.—Marcus Aurelius was a man of sage counsel, and many of his sayings remind us of the wisdom of Solomon. Here is one: "Get up! In the morning when thou risest unwillingly let this thought be present, I am rising to the thoughts of a human being. Dost thou exist then to take thy pleasure, and not for action and exertion? Dost thou not see the little plants, the little birds, the ants, the spiders, *the bees* working together to put in order their little parts of the universe, and art thou unwilling to do the work of a human being, and dost thou not make haste to do that which is according to thy nature?"

How to Know Swarmed Stocks.—When a swarm comes out with no watcher near, it is difficult to tell from which out of a number of hives it has issued. Here is an infallible test, simple in performance, and within the reach of all: Take a cup and place a spoonful of flour in it. Detach about a score of bees from the cluster, letting them fall into the flour. Cover the mouth of cup with palm of hand and shake all together, thus giving them a thorough dusting. Throw them down on a clean place, some distance away, and remove the skep with swarm to a new site, preferably where it cannot be readily seen by the dusted bees. These latter, as soon as they have got over their astonishment at their rough treatment, fly at first in the direction of the spot where the swarm settled, but finding no bees there, they make, wisely, for their old home. I found this in the JOURNAL years ago, and now hand it down to the new generation.

Poisonous Honey.—Some time ago I dealt with this subject, and promised to revert to it. Lately in the public prints several cases have been recorded where deleterious results followed the eating of certain kinds of honey. The very interesting account given on page 280, if substantiated, would confirm this beyond dispute. Certain kinds of honey undoubtedly create nausea, vomiting, and produce other marks of poisoning. I think it is distinctly implied in Jonathan's answer to Saul, "I tasted of the honey and my eyes were enlightened," that it acted as a regular stimulant. So long ago as our school-boy days we remember reading in Xenophon's "Anabasis," in the "History of the Ten Thousand," that something like a temporary insanity or a species of drunkenness pervaded the whole army when they ate of the honey of Trebizond. A modern writer records that he recently saw exactly the same effect produced by the eating of honey in that country. An Italian bee journal lately recorded that the members of a family who partook of a certain kind of honey were all seized soon after with "delirium, dancing and gesticulating like lunatics." After a profound sleep they gradually recovered. Mr. Root holds that honey may be poisonous both for the bees and for human beings, and in his "A. B. C." gives well-authenticated instances of this happening in each case.

Dr. Gramma, one of his authorities, in

describing the effect the poisonous honey had on the soldiers, gives almost a paraphrase of Xenophon's description. The evil effects lasted for several days, and where an over-indulgence of the tempting sweet had taken place, he certifies that even death followed. It appears as if a species of drunkenness first set in, followed by sickness, and then ensued drowsiness and a desire for sleep. As far as taste and smell are concerned, it is well known that different plants yield honey of a distinct aroma and flavour so decided that an expert honey taster can at once declare the source from which most of our distinctive honies are gathered. This has a bearing, I think, on the point under consideration. Mr. Shorthouse [4679] considered that as the active poison was mainly located in the roots of plants, nectar sucked from the flower would be innocuous, but this scarcely follows. The root is often to a certain extent the store where the juice is hoarded up until required by the stem, &c., and this juice is really the food of the flower and flows by the stem to the nectaries, where it is found by the bees and transferred by them to their cells. The aroma of the plants being distinctly conveyed to the honey, it follows, I think, that bees may convey some of their poisonous property into their honey stores. It has been noted that one species of lime brings about a certain amount of stupefaction, not only to hive bees, but even to wasps and the more lusty humble bees. I can myself certify that I have seen the latter acting in every way as if they were under the influence of a narcotic, and I remember once supplying the JOURNAL with a short paragraph on "Drunken Humble Bees."—D. M. M., *Banff.*

THE HONEY BEE.

ITS FRIENDS AND FOES.

[4866.] I venture to suggest that it would render your journal still more interesting were you to occasionally devote a portion to instructing apiculturists in the sciences of entomology and botany.

I do not mean to thoroughly embrace the subjects in all directions; that I know to be both needless and impossible, but only so far as would interest and enable many of us who are keenly interested in bees, insects, butterflies, flowers, &c. (collectively, the honey bee, its friends and foes), to grasp our subject more perfectly from a scientific standpoint, and, at the same time, provide a very healthful pastime for our winter hours of leisure.

Bee-keeping, as we all well know, has long since left the hands of the superstitious faddists, perhaps from the time the bar-frame hive came into vogue, since which apiculture has developed into quite an industry; and we now find it has energetic followers, possessed in many cases of much scientific knowledge; in others, people who would so interest themselves if the means for so doing were given.

Hence I venture to suggest that the JOURNAL should devote a portion known as "The Science Corner," and give, periodically, plain and concise directions for killing, dissecting, preserving, mounting, and naming specimens of interest to the apiculturist, *i.e.*, the queen, drone, and worker bee in their different stages of life; specimens of the different breeds of bees, the ant, earwig, wax-moth, spider, wasp, fly-catcher, tits, &c.; and perhaps go a step further in directing for the gathering of the various honey-giving flowers, and the pressing of them so that their characteristic points are made manifest. In fact, I think there is no limit to such a fascinating and instructive pastime, and I feel sure it would, or at least should, find many interested workers, especially as the outlay in instruments required for carrying out the experiments is but trifling.

Then the reward, I am sure, is well worthy of the labour (if correctly termed). For instead of producing from an old match-box, hidden away in some remote corner, a specimen of a once-favoured queen, which in her day worked wonders in her honey-getting, brood-rearing, or colour-producing qualities, or what not, we show our friends a frame of beautifully mounted, carefully preserved queens, insects, or otherwise, each of which is in a natural life-like position, or an album of mounted botanical specimens, each correctly and scientifically named; we feel justly proud of our undertaking, and, besides, we render our subject far more interesting and instructive, and may be the means of others taking up the pursuit. However, before doing so, they want reminding of the old fact that a thing badly done is a constant thorn; whereas a thing well done is an object of beauty—consequently a joy for ever.

Finally, it would give me much pleasure if prizes were offered for the best collection of mounted specimens in entomology and botany at our honey shows. I am sure our scientific workers, of whom we are vastly proud, would gain encouragement, and the exhibition should be of additional interest to all observers.

In conclusion, I sincerely tender my apologies if in my suggestions I have overstepped the boundary of etiquette.—W. H., *Evesham, August* 13.

CURING VICIOUS BEES.

[4867.] The following incident may be of some use to some of your numerous readers who are troubled with vicious bees. It will undoubtedly amuse many who are bee-keepers, if you consider it worth publishing. In June last I happened to call upon a bee-keeper whose bees, especially those belonging to one hive, were in a most furious state, and had been so for some days. As I approached the hive in question, I was at once surrounded by bees, whose well-known "war note" could not be misunderstood. They meant, evidently,

"a fight to the finish," and as the assertion of the good housewife, who said with special emphasis, "They are positively dangerous," was only too true, realising the situation (there was a public roadway on one side of the garden), I requested that the bees should not in any way be disturbed, and requested that a bogey-man, or "scare-crow" should be placed near the hives and moved to a different position from day to day, the object being to make them familiar, at least, with the appearance of a human figure. The desired end was attained, not altogether as I anticipated, but on August 14 the owner writes me:—"Your suggestion to put up a hat and coat in front of hive of ill-tempered bees worked wonderfully. All the bad bees evidently stung the hat, which was covered with stings, and we have had no stings since, although going near the hives."—WILLIAM SOLE, *Wimbledon, August* 16.

INSECT NOMENCLATURE.

[4868.] With reference to the comb of little cocoons sent me for identification last week, and mentioned on page 327, one perfect insect emerged from it last evening, and in two hours' time about thirty had made their appearance. No more have since come out, although there are a number of cells still capped over. The insects turn out to be a species of ichneumon-fly of the section Braconidæ. I have been able to identify it from the tables given in Marshall's work on the Braconidæ (in André's "Species des Hyménoptères") as *Microgaster alvearius*, Fab. Marshall gives a note on the comb-like arrangement of the cocoons of this species, a translation of which I give here.

"These insects are autumnal and social parasites in geometer- (looper-) caterpillars.

"The larvæ practise a method of arranging their cocoons, which is also common to those of *M. flavipes* and *M. minutus;* they place them in the form of a honey-comb, often to the number of a hundred, with no external covering beyond a band of silk which surrounds the circumference of the combs. This borrows very often the contour of the space left vacant underneath the body of the caterpillar, which preserves in dying its characteristic loop-like attitude. In England these combs are frequently to be found attached to various kinds of shrubs, especially to the twigs of the jasmine. In other countries of Europe this microgaster is apparently less well known. .... Ratzeburg gives *M. alvearius* as parasite on a saw-fly, *Nematus septentrionalis*, L.; but this statement is refuted by other observers. This species can usually be obtained from *Rumia luteolata*, L., and from *Bormia gemmaria*, Brahm."

Rumia luteolata is one of the brimstone moths.—F. W. L. SLADEN, *Ripple Court Apiary, Dover, August* 16.

JUDGING HONEY (?).

[4869.] At a local flower show held here this week prizes were offered for "six sections of honey," and I am told by the steward that the judges awarded the prizes according to the weight of the exhibit. Prizes were awarded to sections which were not evenly capped, of a bad colour, travel stained, and the surface of the sections very uneven, whilst an exhibit which was beautifully finished, without pop-holes, with comb well attached to wood on all sides, of uniform colour, and the capping perfectly even, were passed over simply because the sections did not happen to weigh to so much, although they were all over 16 oz. each. The unfairness of the awards was so apparent that many persons expressed surprise.

I should like to know whether "weight" is regarded as the main factor in determining awards in such cases?—E. W., *August* 16.

[We omit name of locality where the show referred to was held for obvious reasons; but the way in which the prizes were awarded clearly shows that the gentlemen who were appointed to judge the exhibits had no experience of the work. The onus consequently falls upon those who selected the judges.—EDS.]

FOUL BROOD REMEDIES.

[4870.] In ordering a fresh supply of foul brood remedies I may say naphthaline does remarkably well. I cannot say that it actually cures foul brood amongst the bees, but I do know that some of my colonies that have been well-nigh rank with disease have in the course of two seasons so recovered as to become powerful enough to collect me three crates of shallow frames crammed full of delicious honey this season.

My time is too much limited to allow me to manipulate my thirty or forty colonies on the orthodox principles, so I have to work on the let-em-alone system, and any foul broody hive gets closed down to its ten-bar frames, wrapped up closely with a medium width entrance, and naphthaline dropped down each corner of the hive about once in ten days during the honey season. The result of this is that the bees in nearly every case turn out remarkably strong the next spring, and prove some of my very best honey gatherers.—MORETON LORD, *Sussex, August* 9.

(*Correspondence continued on page* 336.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Our friend Mr. Hopkins, whose apiary appears this week, sends such full and interesting "notes" concerning himself and his useful bee-work that we may well allow them to speak for themselves without any addition from us. He says:—

"I have been myself very much interested

in the 'Homes of the Honey Bee' pictures in B.B.J., and although my apiary is only a small one, I thought it might interest some of your many readers to let them know that bees can be made to pay a labouring man if properly managed, as well as those with larger incomes. I commenced bee-keeping in 1890 with one skep, having caught the 'bee fever' through hiving a swarm for a friend without getting a sting. Previously to this I had no liking at all for bees, but I have now fifteen colonies, some of which could not be shown in the photo. These are quite as many as I can manage well, having to be at my work from six in the morning till eight at night and often later. After seeing a copy of your valuable front is a privet hedge, which I planted as a screen for the purpose of causing the bees to rise over a pathway only about four yards from the front of the hives. I find it necessary to take these precautions in order to keep the bees quiet, as there are neighbours who use the pathway as well as ourselves, and I am glad to say that they hardly ever get a sting. I also gave my neighbour a swarm, and lend a hand in managing them, so we get along very well together. You see by photo that the hives are rather too close together, but this cannot be helped, owing to want of space in my garden. The two figures seen in photo are the good wife and myself. She does her share in the bee-work by ex-

MR. C. HOPKINS' APIARY, HAMPTON LEVETT, DROITWICH, WORCESTER.

BEE JOURNAL (for which I am indebted for all my bee knowledge), I was soon convinced that a good bar-frame hive was the best to work with, and I bought one; then added one or two each year as my slender income allowed. They are on the 'W.B.C.' plan, and all interchangeable except one. I do very well with them, my average 'take' of honey being about 80 lb. per hive all round. I have, however, got as much as 130 lb. from one hive. I make it a rule to prevent the issue of any swarms by giving room a little in advance of requirements, and by shading the hives in very hot weather. The foliage seen at the back is raspberry canes and black-currant trees, which I planted for shelter. In the tracting and bottling the honey, fitting up sections for use, and cleaning and grading them when taken off, which latter items we make two of our chief points in management. I attend to almost all the bees in our parish, where 'box' hives are kept, for they are not worthy to be called bar-framed hives, some of them being old sugar-boxes, with no roof on. The bee-men about here are mostly skeppists, but I do my best for them.

"So you see I have my hands pretty full, but it is always a pleasure to me to work among the bees.

"My hobby for 1902 was a nucleus of White Star Italians, which I am pleased to say have done exceedingly well. Besides throwing off

a large swarm, which I returned after removing four frames packed with brood and all queen cells, some of which I used for re-queening, they have fitted a box of shallow frames, about 30 lb. weight, and three racks of sections, making a total of 93 lb. I call this good for the short honey season we have had here.

"I must now bring my story to a close, as I fear I have exceeded my space, with good wishes to all bee-keepers, and especially our worthy Editors, one of whom I had the pleasure of meeting once and hope to do so again at some future time."

CORRESPONDENCE.

(*Continued from page* 334.)

NOTES OF A "QUAYLE" CALL.

THERE IS A HAPPY LAND, FAR, FAR AWAY.

[4871.] It is now a long time since we used to sing about that Happy Land, with only the vaguest of childish ideas as to its exact location. Suffice it to say that we have found it, that it is all our fancy pictured it, and that it is not so *very* far away.

It is no myth; neither fairyland, though scored by many a fairy glen; nor topsey-turveydom, although, whilst a part of the Empire, it governs itself; although its Arms are legs; and though whilst its title is the Isle of Man, it is not devoid of women, and other trifling anomalies. We fear that is doubtfully expressed, and that the gude wives will have somewhat to say on the matter.

Our apologies, ladies, it is the work of the "printer's devil," that should have been a semi-colon.

Yes, the Happy Land of Mona.

> Mona! thou Gem of the Ocean,
> Mona! thou Pearl of the Deep,
> Peaceful amidst its commotion,
> Lull'd by its Tempest to sleep.

The stern claims of a workaday world have torn us from its embrace, but it "still doth haunt us in our dreams," and we imagine ourselves again basking in its sunlight, listening to the music of its bees.

It might be thought that "Mona" and "Man" are equivalent terms, but the synonym should be handled with care, as, whilst there are many bee-men in the island, there are no bemoaners over Mona's bees! Curiously enough, it was a bee which first greeted us, and which came aboard at Douglas, perhaps to look for friends, or, possibly, like the snowy-pinioned gulls, seeking what it might devour! The Manx bees are *very* intelligent! We wish we could also record that they have no tails!

Truth compels us to state that it was not "Mellifica," but of the humble-bumble order, so that we could not regard the twinkle in its iris as a message from a brother bee-man. We, therefore, called upon brother Horsley for our welcome, and had full measure meted to us by mine host of the Merridale House, who seemed to be more than busy with a houseful of visitors, but yet found time for a bee-chat.

Mine merrie host, we wonder how any bee can be found with sufficient hardness in its feminine heart to sting you, or with strength of mind to decide upon which particular part of your broad, cheery countenance to leave its mark. "May you live and prosper, and may you never lack a harvest of visitors in the poorest of seasons." Our advice to all holiday-making bee-keepers is, "Go and stay with——," but we suppose this should really go into the advertisement columns.

It was our intention to visit Mr. Lancelot Quayle, and we were assured by Mr. H. that we should have the right hand of Manx good fellowship extended to us, as we found to be the case when we called upon the genial post-master of Glen Maye, known to most British bee-keepers as the holder of single-hive record returns. We introduced ourselves as having heard he kept a bee, and might we see it; also our friend, Mr. Geo. Crawshaw, as a nephew of the late Mr. Geo. Neighbour, and we were at once upon the familiar bee-speaking terms. Mr. Q. took us into his house, and showed us all that was his, rejoicing our hearts by the sight of bees tumbling home with distended bodies, singing the honey song, whilst the aroma of early heather honey filled the air. And this, whilst with *us* the feeders are in use on strong stocks lest they starve!

Of Mrs. Quayle's hospitality too we partook. They would have us sit at their table, and, needless to say, sample their honey. We have the pleasantest recollection of our visit. And the bees! We were privileged to inspect some of the hives, and later to assist in removing numerous boxes of shallow-frames, busy as the bees themselves, check-weighing, extracting, and returning empties, wrapped up the while in a most business-like clean apron. Mr. Q.'s official assistant, although securely veiled, suffered from the "jumps," and was, we think, glad to be excused when we offered to take his place. As it was clearly Mr. Q.'s buzzy season, he was sorry we had not called earlier to avoid the rush. Still, we did good work during our limited time. Mr. Q. is a user of the carbolic cloth, but likes the moral support of a smoker in readiness—or rate blackness—as when called upon for a verdict it was commonly "out." It was of the "cold blasted" order—we speak of it advisedly in the "imperfect" tense, and in our anathema of the tense transposed the order of its title.

How Mr. Q. smiled as frame after frame out of the upper crates came to view sealed to the bottom, but for a few cells of the heather honey just beginning to pour in. By the way, he maintains that his heather surplus comes from the bell heather, not the common ling. We were duly shown the "record" hive, and another which has since yielded over 350 lb.

This is a bad season for him; he does not expect "to average much more than 100 lb. per hive!" What are the secrets of his success?

Thoroughness and Capability.—He believes in the best, and uses, for instance, full sheets of the finest weed drove base fir in his shallow-frames. We have been at work with him, have seen his books, and can testify to the careful way his returns are handled.

Substantial Hives.—These are home-made, double walled, and with a large brood nest; twelve or thirteen standard frames. His bees "would be constantly swarming with fewer." He is, however, in a large frame of mind, and intends to experiment with the commercial 16 in. by 10 in.

A Prolific Strain of Bees.—The progeny of the record queen has, we understand, gone to improve the stock of a noted breeder.

A Bee District Second to None.—Mr. Q. informs us that from the early gorse to the late heather there is always some forage, and he does not despise the claims of the dandelion or the humble daisy to rank as honey producers. His bees are situate in a valley, sheltered from the winds, and sail downhill with their load to the little garden, or the roof of the house, where records are made; to create fresh figures. "A land flowing with milk and honey," and except that most of the milk seems to be cream, this would be a good description.

But Q. is not always without trouble. Last Sunday, for instance, his bees swarmed high in an old ash tree. So he "ups" with a home-made "Manum" catcher; most of his outfit is home-made—and well made too—except the Manum, and that mattered. For it broke, and most of the bees fell on poor Q., who fled "extinguished." At least, if wishing could have got the stings out, he worked hard. The bees brought their defensive organs into full play, and whilst Q. paid the piper, this was hardly the tune he had called!

However, with the help of the "extractor" and a corkscrew he found himself again, and after shovelling the stings into his formic acid bottle, he went to church thinking deeply! Well, if your bees *will* do these things on Sunday, Mr. Q.——

It was not until next day that the scattered cohorts were safely housed, and when we saw them were working as merrily as if nothing had happened, although one or two bees seemed to remember Q.'s face.

We wonder, does he know those beautiful lines of the Laureate beginning:—

> There was an old man up a tree,
> Who was awfully bored by a bee,
> When they said "Does it buzz?"
> He replied "Yes, it *does*,
> It's a regular brute of a bee!"

Goodbye, Bro. Quayle, the best of continued success be yours, and better luck next year. Only 100 lb. a hive! Poor, poor man.—L. S. CRAWSHAW, *Ilkley*, *August* 14.

Queries and Replies.

[2950.] *Surplus Pollen in Combs.*—Last year I took from hives seven bar-frames for honey extraction between September 16 and 21. Their average weight before the honey was extracted was 3 lb. 14 oz.; after extraction 2 lb. 2 oz. Allowing 12 oz. as the weight of the frame and empty comb alone, the stored pollen, &c., of each frame must have weighed on an average 1½ lb.—that is, sixth-sevenths of the weight of honey yielded. The bees are not much inclined to remove the non-honey stores, and it is not advisable, I believe, to leave the full number of frames in the hives during the winter, thereby extending the space to have kept warm. Consequently nearly all this "bee bread" was wasted, for it soon gets mouldy. Yesterday, the examination of a hive showed that at present there is not much bee-bread stored. 1. Is it then desirable to take the honey now, leaving in the hives bar-frames enough for what additional store room the bees may want before the end of the season? It would not be much. Waste of "bee-bread" would thus be avoided, though to take combs now would, no doubt, involve some loss of brood. 2. Also would you kindly tell me whether, in the event of frames being removed now, it is expedient to turn the bees' lost energies to account by giving them full foundation and syrup to induce them to draw out the foundation-sheets into combs for next year's use when swarming begins?—A READER, *Wokingham*, *August* 16.

REPLY.—Bee-keepers should use every means to prevent the storage of pollen in combs intended for surplus honey. Yours is simply a question of bearing this in mind in the future, as the frames in question can be of little use to preserve as store-combs. 2. It is now too late to get comb-foundation drawn out.

[2951.] *Robbing by Bees.*—Kindly advise the best course to adopt in the following case:—I have three single and one double (Wells) hives. A few days ago I noticed a great commotion on the alighting-board of "Wells Right" (I will call those two colonies—they enter from the ends—"Wells Right" and "Wells Left"). I thought it must be a case of robbing, so gradually closed the entrance to about a finger's width, and put a cloth saturated with phenyl on the board. The bees did not like it, but the commotion continued—a mass of excited and raging bees. I then opened the slides full and put a piece of perforated zinc in front, thereby closing the entrance, and kept them so for a night and day. Next evening, on removing the zinc, I found most of the bees dead. Was this a case of suffocation? In the meantime the robbers had attacked the "left." This entrance I had closed to a bee's space. They clustered on the

alighting-board in spite of saturated cloth, &c. I opened the slides full, and put in place a piece of perforated zinc, as on the other side; but in addition to this I removed the centre piece of glass on the top of the frames and replaced it with perforated zinc—16 in. by 6 in., I should say. I use sheets of glass on the top of the frames, under the quilts, in all my hives; in each case the glass is divided into three pieces. Kept them (the bees) shut up all day, late at night removed the zinc from the entrance, but replaced it in the early morning, when the inmates appeared none the worse for their confinement. The robbers now turned their attention to the nearest hive, whose entrance I had closed up to a bee's space, and put a saturated cloth on the board, but the attack was just as determined as in the other cases. Closed the entrance and removed the middle sheet of glass from the top, and put a piece of perforated zinc in place of it; after dark opened the entrance and closed it again early next morning, when the bees appeared quite lively. It now looks as if the other two hives will not be allowed to escape a visit from the robbers. The three colonies attacked are not weaklings; on the contrary, they are strong. The first, a May swarm (9 lb.), has given me 38 lb. of honey (shallow frames); the second, with 1901 queen, 43 lb.; the third also 1901 queen, 37 lb.; and "this is a very bad season" I am told.—W. C. H., *South Devon, August* 18.

REPLY.—It seems to be a case of determined robbing on a large scale, and the reducing entrances so very much has helped the bees of attacked stocks to kill off the marauders.

[2952.] *Bees Swarming after Removal of Surplus Honey.*—I placed a super-clearer on a hive on the 15th inst. and removed sections and super-clearer the afternoon of the 16th inst. About an hour afterwards, namely, about 3.30 p.m., a small swarm issued from the hive and settled upon an awning over the hive. As the day was a very warm one perhaps the bees thought that summer had arrived, but is not the occurrence an unusual one?—WEYSIDE, *Woking, August* 18.

REPLY.—It is a very unusual occurrence, and can only be accounted for by the changed conditions under which the bees found themselves after their stores had gone.

[2953.] *Bee Nomenclature.*—A few days ago I noticed some bees, which I thought resembled the honey-bee, carrying pieces of leaves under a slated roof near by. I noticed that some were busy with the leaves, while others carried in pollen, and on lifting some of the slates I found a quantity of cells made of the leaves beautifully arranged, and even capped with the same. As I have never seen anything of the kind before, I should be very much obliged if you will kindly give some information about it in the JOURNAL. I enclose some of the cells and bees.—B. C., *York.*

REPLY.—The interesting specimens sent are the work of the leaf-cutter bee.

Bee Shows to Come.

August 23, at Barnton, Northwich.—Honey Show in connection with the Flower Show. Honey department—Seven local classes and one class (open to all Cheshire) for twelve 1-lb. jars "light" honey. The Cheshire B.K.A. bronze medal goes to the winner of first prize in this class.

August 23, at Hyde.—Cheshire B.K.A. Show, in connection with the Cheshire Agricultural Society. Eight classes for Hives, Honey, and Wax.

August 26, at Cartmel, Lancs.—Honey show in connection with the annual show of the Cartmel Agricultural Society.

August 27, at Reading.—Honey show of the Berks B.K.A., in connection with the Reading Horticultural Society. Open to Berks only. Schedules and all particulars from D. W. Bishop Ackerman, Hon. Sec. Berks B.K.A. **Entries close August 23.**

August 27 and 28, at Warwick.—Honey show of the Warwickshire B.K.A., in conjunction with the Annual Show of the Agricultural Society. Schedules from Jas. Noble Bower, Hon. Secretary, Warwick B.K.A., Knowle.

August 27 and 28, at Uttoxeter.—Bee and Honey Show in connection with the Annual Show of the Staffordshire Agricultural Society.

August 28, at Montgomery, N. Wales.—Honey show in connection with Montgomery and District Horticultural Society's Exhibition.

August 28, at Llangollen.—In connection with the annual Flower Show. Open classes for Six 1-lb. Sections, Six 1-lb. Bottles Extracted, and Beeswax.

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society.

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market. Numerous classes and liberal prizes for comb and extracted honey and bees wax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules (now ready) from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 26.**

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes,** including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon.

Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries close August 23.** Double fees to August 30.

September 10 and 11, in Waverley Market, Edinburgh.—Midlothian Bee-Keepers' Ninth Exhibition. Seven open classes. Prize money, 12s., 8s., 4s. Entry 2s. Schedules from W. Weir, Heriot, Midlothian. **Entries close September 3.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath. **Entries close September 1.**

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 30.**

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. (Open to Northumberland and Durham only.) Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close Sept. 8.**

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

ERRATUM.—*Bee-spaced Dividers.*—Referring to Mr. Sheppard's letter (4859, p. 323) last week, in line twelve, the words "he was not quite satisfied" should read *he is quite satisfied.* We regret that a printer's error should thus have conveyed an altogether wrong impression.

S. M. (Croydon).—*Expert Help Wanted.*—We cannot give you the address of "a Surrey bee-farmer" willing to assist you in re-arranging the bees mentioned. The Hon. Secretary of the Surrey Bee-keepers' Association (Mr. F. B. White, Marden House, Redhill) would, no doubt, be able to get the needed help, if written to.

C. P. (Llandaff).—*Building up Stocks from Driven Bees.*—1. To be safe in preparing driven bees for winter when comb-building is required, the driving should not be deferred after the end of August or first week in September. 2. For syrup for autumn feeding use 10 lb. refined cane sugar to 5 pints water, and boil a few minutes.

J. EDGERLEY (Chorley). — *Bees Fighting among Themselves.*—The vagueness in description was not ours. We did our best to make out the details given correctly. We regret our inability to offer any further explanation of the trouble from the later details you have been good enough to send.

W. E. S. (Worcester).—*Labels for Granulated Honey.*—We do not know of any one who stocks the labels as printed on page 90 of the "Guide Book," but any local printer would print a few for a small sum.

J. PEPPER (Leicestershire).—*Recipe for Mead.*—We can send you a copy of a former issue of B.B.J., with recipe, for 1½d. in stamps.

JESSIE ROWLANDS (Liverpool).—*Robber Bees.*—The "black, shiny bees" are robbers from other hives than the one attacked. They will do no harm so long as the stocks attacked are strong.

J. R. (Coventry). — Your address on the "Wonders of the Bee-Hive" would no doubt be interesting and useful, but it is very much open to question whether Sunday is the most suitable day for the performance of such work. For ourselves, we venture to think it is not.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

J. CLAPPERTON (Galashiels).—Your sample must have miscarried in post, unless it has been detained by the Post Office authorities through bad packing. Anyway, it has not reached this office. Please send another sample.

H. S. S. M. (Stretford).—There is foul brood in comb, but the three cells only did not help us to judge whether or not the disease is of old standing.

R. M. B. (Luton).—There is no disease in comb.

B. Y. (Redditch).—Foul brood is just developing, and if the stock is strong in bees, we should treat them as a swarm in a clean hive. With only three or four cells to judge from, it is, however, impossible to tell the condition of other combs in the hive.

CONSTANT READER (Thorverton, Devon).—There is foul brood in both samples of comb sent.

Honey Samples.

F. K. (Lewes).—The honey is good, and will be quite suitable for showing. It is suitable only for the medium-coloured class.

R. M. (Cowbridge).—Both honies are good. Judging by present condition, we think

No. 2 will be the better. No. 1 is not sufficiently warmed to dissolve all the granules; but if No. 1 is made as bright and clear as No. 2, it will stand first in quality.

F. HENDER (Glos.).—1. All three samples are good honies. No. 1 excellent in colour and nice flavour, but rather thin. Nos. 2 and 3 are also good in colour, though several shades darker than No. 1. Their flavour is also good, so that, without being quite first class, they would stand a good chance on the show-bench. 2. For particulars regarding membership of B.B.K.A. apply to the Secretary, Mr. E. H. Young, 12, Hanover-square, London.

*** *Some Queries are unavoidably held over for reply till next week.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

ABOUT SIX CWT. good light HONEY in tins or bottles. Offers. GARNER, Dyke, Bourne. o 42

80 LOTS DRIVEN BEES, 1s. 3d. lb., or 3s. 6d. per lot. J. BARNES, Burwell. o 44

FOUR STOCKS of HEALTHY BEES two in "W.B.C." hives, £1 each. Leaving country. E. HODSON, No. 31, Upper Valley-road, Sheffield. o 30

EXCHANGE handsome blue-ticked SETTER BITCH, two years old, for honey. WALKER, Grotto, Kirkby-Stephen. o 31

HONEY WANTED (good extracted), in tins, light or medium. Price to APHIS, *B.B.J.* Office. o 54

HONEY WANTED (old granulated), in tins. Quantity and lowest price to APHIS, *B.B.J.* Office. o 53

THREE STOCKS of BEES FOR SALE, Carniolan, Italians, standard Hives, price 15s. each. D. COLE, Moor Cottages, London-road, Colnbrook, Slough, o 52

EXTRACTOR, "Little Wonder," one frame little used, working order, 5s. 6d. E. EDDISON, Shireoaks, Worksop, Notts. o 50

"HOW TO CLEAN POLLEN-CLOGGED COMBS," on receipt of 1s. 1d. D. VALLANCE, Dunaskin, N.B. o 46

THREE GOOD LOTS of BEES, in standard Frame Hives, price £1 each. D. COLE, Moor Cottages, London-road, Colnbrook, Slough. o 27

26TH YEAR.—My noted small swarms, 5s. 6d., cases free. First-rate Queens in introducing cages, 5s.; delivered. ALSFORD, Expert, Blandford. o 8

CLOVER HONEY, fine quality, in tins about 28-lb., or screw-cap and tie-over jars. Sample, 2d. J. GEARY, Barwell, Hinckley. o 14

WANTED, this season's ENGLISH HONEY, in 14 or 28-lb. tins or bulk. Send sample and price. Carriage paid. H. SHORTHOUSE, 47, Pershore-road, Birmingham. o 40

HEALTHY three-frame NUCLEUS, including brood and honey, fertile Queen, 9s. 6d. Good SECTIONS WANTED. JOHN THOMAS SOLE, 133, Stinton-street, Cambridge. o 41

SECTIONS of HONEY (1902) required, at 6s. doz. Carriage forward. Any quantity taken above three dozen. Write, GORDON ROWE, Honey Packer, Market Lavington, Wilts. o 45

COCK GOLDFINCH and HEN CANARY (bred mules), one breeding and three single cages, Exchange 3 lb. Driven Bees with Queens. ARNOLD, Owen Villa, Victoria-road, New Barnet. o 47

Prepaid Advertisements (*Continued*).

SPLENDID EXTRACTED HONEY, in 1-lb. screw-cap bottles, 8s. per doz. Carriage paid on quantities. Four 1st prizes this year. Sample, 5d. J. TREBBLE, The Apiaries, Romansleigh, South Molton. o 48

1902 FERTILE QUEENS now ready, 4s. each. Orders booked for driven bees, strong lots, 3s. 6d. each. HEWETT & HILLS, Laburnum Apiary, Alton, Hants. o 29

FOR SALE (after coming off Heather), 40 Strong STOCKS BEES, 1902 Queens, all in first-class new Hives, price 22s. 6d. each. METCALFE, Stockeld Grange Wetherby. o 51

THREE BAR-FRAMED HIVES, very strong with Bees, on eight Frames each. Section Crates, last year's swarms; guaranteed healthy; with winter stores; genuine; accept £4 or offer. BEST, Abingdon, Berks. o 32

HEALTHY DRIVEN BEES, headed with young Queen (not less than 4-lb. lots) price 1s. 3d. per lb. Boxes returnable. Also young Queens, 1s. 6d. each, post-free. R. BROWN, Flora Apiary, Somersham, Hunts. o 43

EIGHT STOCKS of BEES, guaranteed strong and healthy, each on ten standard bars, young queens, hives good as new. Wax extractor, honey strainer with pot; also quantity of HONEY. What offers in cash? Inspection if desired. One double-stocked hive. CHATHAM, Junr., Leominster. o 55

BELGIANS for BEES, &c. Twenty very promising youngsters, five weeks, Fashoda and Lordgate-House strain, Exchange Observatory Hive or anything useful to a Bee-keeper. Two splendid Does in kindle and one Buck, Fashoda strain, Exchange ditto; all healthy. FURBER, Old Trafford, Manchester. o 49

WANTED, any quantity BEESWAX. Good price given. ROSS, Barkerland House, Dumfries. o 37

1 CWT. of OLD HONEY, in two tins, 50s. E. HOLDER, Grosvenor Cottage, Bath. o 36

WANTED, NEW SECTIONS (first quality). State lowest for cash. CHILTON, Polegate, Sussex.

HEALTHY DRIVEN BEES with Queen, 5s. lot. Boxes returned. A. MORETON, Bee Expert, Leigh, Worcester. o 20

SECTIONS and EXTRACTED HONEY WANTED (best quality Sainfoin or Clover). Mention price. F. SLADEN, Ripple Court Apiary, Dover. o 12

DRIVEN BEES, August delivery, 3s. 6d per lot with Queens; Boxes returnable G.W.R. PULLEN, Ramsbury, Hungerford. o 11

SPLENDID LOT of EXTRACTED HONEY and SECTIONS; tins returnable G.W.R. PULLEN, Ramsbury, Hungerford. o 10

FINEST EXTRACTED HONEY, 1-lb. jars, 7s. 6d. doz. Special quotation for quantities. W. BURDEN, Mere, Wilts. o 24

PURE MOUNTAIN HONEY, all from Sections, run and in comb. Apply MASSY, Newgate, Rock, R.S.O., South Wales. o 1

HEALTHY DRIVEN BEES, 1s. 3d. per lb., not less than 4 lb. (Boxes to be returned.) E. LONG, Fulbourn, Cambs. o 34

DRIVEN BEES.—Strong STOCKS, with Queens, 5s. Package returnable. PHILLIPS, Spetchley, Worcester. o 35

SIX strong STOCKS of BEES, with or without Hives, all on Standard Frames. JOHN BROOKFIELD, Gardener, 108, Stamford-road, Birkdale, Southport. o 38

15TH YEAR.—Still cheapest and best. Garnett's original English Screw-cap HONEY JARS. Six dozen 7-oz., 8s. 9d.; ten dozen 16-oz., 16s. 6d. Free on rail; cash. GARNETT BROS., High-street, Rotherham.

FINE TESTED 1902 FERTILE QUEENS, 3s. 6d. each, post free. Bees, 1s. 6d. lb. for 5-lb. lots or over, Queen included. Guaranteed healthy, package to be returned. WHITING, Valley Apiaries, Hundon, Clare, Suffolk. o 9

Editorial, Notices, &c.

SOME IMPORTANT SHOWS

FOR WHICH ENTRIES ARE STILL OPEN.

We again beg to draw the attention of readers to the dates of closing entries for several very important shows which will be held during the next week or two. To name them in the order of precedence, there is, first, the Grocers' at the Agricultural Hall, for which the entries close in two days—*i.e.*, on Saturday next, August 30. Then follow the shows of the Kent and Sussex and the Surrey B.K.A. respectively. These two exhibitions run concurrently at the Crystal Palace, and the final day for entries is in both cases, Monday next, September 1. Finally, we have the Dairy Show, held the first week in October, the entries closing on Monday, September 8.

The liberal prizes offered at the above-named shows should tempt all who possess good samples of honey to make an entry, especially as the occasion may be taken advantage of to dispose of all exhibits for sale on the spot. There should not be much trouble in effecting sales if good honey is as scarce as reports lead us to believe. And we shall be surprised if B.B.J. readers do not avail themselves of the chance at prize winning.

SHROPSHIRE B.K.A.

ANNUAL SHOW.

The annual show of the above association was held at Shrewsbury on August 20 and 21 in the picturesque grounds of "The Quarry," in connection with the Shropshire Horticultural Society's great Floral Fête. The weather was everything that could be desired. The attendance was a record one, between 60,000 and 70,000 persons entering the grounds on the second day.

The entries in the honey section of the show were less numerous than last year, owing to the unfavourable season, but the exhibits were of excellent quality, both of comb and extracted honey.

The B.B.K.A. silver medal was secured by Mr. J. Clay, Mr. S. Cartwright and Mr. G. Croxton securing the bronze medal and the certificate respectively.

The arrangements of the show were efficiently carried out by a committee of which Mr. Roff King was chairman, Miss M. E. Eyton hon. treasurer, and Mr. S. Cartwright hon. secretary.

The judges were Mr. W. Broughton Carr, London, and the Rev. E. Charley, Ince Vicarage, near Chester, who made the following awards :—

OPEN CLASSES.

Twenty-four 1-*lb. Sections.*—1st, J. Carver, Wellington, Salop ; 2nd, Phil. Jones, Church Stretton ; h.c., S. Cartwright, Shawbury Shrewsbury.

Twelve 1-*lb. Sections.*—1st, Toddington Orchard Company, Gloucester ; 2nd, W. Ratcliff, Barthomley, Cheshire ; 3rd, A. Hamer, Llandilo, Carmarthenshire.

Twelve 1-*lb. Sections* (*other than* 4¼ *in. by* 4¼ *in.*).—1st, J. Carver ; 2nd, J. Clay, Wellington, Salop.

Twenty-four 1-*lb. Jars Extracted Honey* (*light colour*).—1st, E. Clowes, Blackbrook, Staffordshire ; 2nd, J. Carver ; v.h.c., S. Cartwright ; h.c., R. Holland, Wellington, Salop.

Twelve 1-*lb. Jars Extracted Honey* (*light colour*).—1st, S. Temblett, Andover, Hants ; 2nd, A. G. Preen, Nesscliffe, Salop ; 3rd, F. Blake, Broughton, Hants ; 4th, E. Clowes ; v.h.c., E. H. Millward, Kidderminster, and J. Clav ; h.c., J. R. Bennett, Kidderminster.

Twelve 1-*lb. Jars Extracted Honey* (*medium colour*).—1st, W. H. Brown, Shrewsbury ; 2nd, S. Cartwright ; 3rd, A. Hamer ; v.h.c., P. Scott, Broseley, Salop, and E. P. Hinde, Heswall, Cheshire ; c, J. Clay and A. G. Preen.

Collection of Honey (*gathered from different flowers and named*).—1st, J. Bradley, Yockleton, Salop ; 2nd, A. Hamer.

MEMBERS ONLY.

Twenty-four 1-*lb. Sections*—1st, J. Clay ; 2nd, P. Jones ; h.c., S. Cartwright.

Twelve 1-*lb. Sections.*—1st, P. Jones ; 2nd, J. Carver ; v.h.c., J. Clay.

Twelve 1-*lb. Sections* (*other than* 4¼ *in. by* 4¼ *in.*).—1st, J. Carver ; 2nd, J. Clay.

Single 1-*lb. Section and* 1-*lb. Jar Extracted Honey.*—1st, W. H. Brown ; 2nd, S. Cartwright ; v.h.c., J. Clay and J. Carver.

Twenty-four Bottles Light-coloured Honey.—1st, S. Cartwright ; 2nd, J. Clay ; 3rd, J. Carver ; v.h.c., J. W. Astbury, Hadley, Salop ; c., F. W. Norris, Cardington, Salop.

Twelve Bottles Light-coloured Honey.—1st, G. Croxton, Yorton, Salop ; 2nd, J. Clay ; 3rd, F. W. Norris.

Twenty-four Bottles Dark-coloured Honey.—1st, W. H. Brown ; 2nd, J. Carver ; c., A. G. Preen.

Novelty in Honey or Wax.—1st, W. H. Brown.

Most Interesting Exhibit Pertaining to Bee-culture.—1st, J. Bradley.

ARTISAN MEMBERS ONLY.

Twelve 1-*lb. Sections.*—1st, J. Churton, Wolleston ; 2nd, E. Brookfield, Myddle.

Six 1-*lb. Sections.*—1st, J. Hammond, Acton Scott ; 2nd, E. Brookfield.

Twelve 1-*lb. Jars Extracted Honey.*—1st, J. Churton ; 2nd, J. Mills, Shavington ; v.h.c., E. Brookfield ; h.c., L. Powell, Cold Hatton ; c., P. Graham, Montford.

Six 1-*lb. Jars Extracted Honey.*—1st, J. Churton ; 2nd, E. Brookfield ; v h.c., W. Bagaley, Madeley.

COTTAGER MEMBERS ONLY.

Twelve 1-*lb. Sections.*—1st, T. Croxton, Hope Bowdler; 2nd, G. Croxton.

Twelve 1-*lb. Jars Extracted Honey.*—1st, G. Croxton; 2nd, J. Bright, Cardington; 3rd, T. Croxton.

Six 1-*lb. Sections.*—1st, T. Croxton; 2nd, J. Stanton, Besford; 3rd, G. Butter, Blore Heath.

Six 1-*lb. Jars Extracted Honey.*—1st, J. Stanton; 2nd, G. Butter; 3rd, G. Croxton; h.c., Mrs. Powell, Cold Hatton.

Single 1-*lb. Jar Extracted Honey.*—1st, G. Butter; 2nd, G. Croxton; 3rd, G. Lloyd.

Single 1-*lb. Section.*—1st, G. Butter; 2nd, G. Croxton; 3rd, T. Croxton.

OPEN CLASSES.

Honey Trophy.—1st, W. H. Brown; 2nd, J. Bradley; 3rd, A. Hamser.

Frame-hive.—1st, E. H. Taylor, Welwyn, Herts; 2nd and h.c., W. P. Meadows, Syston.

Collection of Appliances.—1st, W. P. Meadows; 2nd, E. H. Taylor.

Honey Beverage.—1st, W. H. Brown; v.h.c., J. Bradley.

Beeswax (Salop only).—1st, W. P. Norris; 2nd, J. Carver; h.c., Mrs. A. G. Preen.

Honey Vinegar (open).—1st, W. H. Brown; h.c., P. Scattergood, Stapleford, Notts.

Collection of Bee-flowers (*named*).—1st, J. Bradley; 2nd, Miss E. Humphreys, Yockleton.—S. CARTWRIGHT, Hon. Sec.

NORTHAMPTON B.K.A.

ANNUAL SHOW.

The annual show of the Northamptonshire Bee-keepers' Association was held on August 7, in the grounds of Lady Robinson, St. David's, Kingsthorpe, Northampton. The entries were not quite up to some previous shows, but all the classes had more exhibits than prizes to be awarded. Some fine sections of Mr. W. Todd, Oundle, unfortunately, arrived too late. Mr. R. King (Wolverton) and Mr. J. R. Truss (Ufford) judged the honey, and Mr. George Hefford (Northampton) the honey cakes, and made the following awards :—

Twelve 1-*lb. Sections.*—1st, H. Williams, Overstone; 2nd, R. Allen, Tusmore, Bicester; 3rd, J. Adams, West Haddon; 4th, W. Manning, Northampton.

Twelve 1-*lb. Jars Extracted Honey* (*light*).—1st, J. Adams; 2nd, R. Allen; 3rd, H. Williams; 4th, J. Buckby, Burton Latimer; 5th, W. Manning.

Six 1-*lb. Jars Extracted Honey* (*dark*).—1st, C. J. Burnett, Northampton; 2nd, W. Manning; 3rd, G. Page, Holcot.

Six 1-*lb. Jars Granulated Honey.*—1st, W. Manning; 2nd, R. Allen; 3rd, J. Adams.

Three Shallow Frames of Honey in Comb.—1st, J. Adams; 2nd, J. Bubb, Bugbrooke; 3rd, C. J. Burnett; 4th, W. Manning.

Beeswax (*not less than* 1 *lb.*).—1st, R. Allen; 2nd, F. J. Old; equal 3rd and 4th, G. S. Pilgrim and E. H. Williams.

Six 1-*lb. Sections* (non-winners at previous shows only).—1st, W. H. Williams; 2nd, R. Allen; 3rd, H. J. Norman, Queen's Park.

Six 1-*lb. Jars Extracted Honey.*—1st, W. H. Williams; 2nd, F. E. Norman; 3rd, W. A. Tinsley, Kingsley Park.

Super of Comb Honey.—1st, J. Bubb; 2nd, F. E. Norman; 3rd, W. H. Williams.

OPEN TO THE UNITED KINGDOM.

(Entry free.)

Single 1-*lb. Jar of Honey.*—1st, E. Lodge, High Easter, Chelmsford; 2nd, James Kerr, Dumfries; 3rd, S. J. Mayer, Norwich; 4th, C. Wells, Oxendon; 5th, S. Temblett, Andover.

Single 1-*lb. Jar Extracted Honey.*—1st, C. Lodge; 2nd, J. Adams; 3rd, W. Loveday; 4th, Thos. Blake.

SPECIAL PRIZES.

(Entry free.)

Honey Cake.—1st, Mrs. Bubb; 2nd, Miss Whiteside, Kingsthorpe; 3rd, Mrs. Freshney Thoresway, Caistor; 4th, Mrs. C. J. Burnett; h.c., R. Allen.—(*Communicated.*)

WORCESTER B.K.A.

ANNUAL SHOW.

The above association held their annual honey show on August 13 and 14, in connection with the Dudley Floral Fête. There were nearly fifty entries, and some excellent samples of extracted honey and sections were staged. Mr. T. I. Weston, Wickham-Bishops, Essex, acted as judge, and made the following awards :—

Observatory Hive.—One entry only. No award.

Twelve 1-*lb. Sections.*—1st, C. H. Haynes, Hanley Castle; 2nd, E. A. Millward, Chaddesley Corbett; 3rd, A. R. Moreton, Leigh.

Six 1-*lb. Sections.*—1st, J. R. Bennett, Kidderminster; 2nd, C. H. Haynes; 3rd, M. H. Swift, Churchdown.

Twelve 1-*lb. Jars Extracted Honey.*—1st, E. A. Millward; 2nd, F. J. Moore, Tewkesbury; 3rd, Dr. D. Fitch, Chaddesley Corbett.

Six 1-*lb. Jars Extracted Honey.*—1st, E. A. Millward; 2nd F. J. Moore; 3rd, C. H. Haynes.

Beeswax.—1st, E. A. Millward; 2nd, A. R. Moreton.

Shallow Frame of Comb-Honey.—1st, W. H. Higley, Kidderminster; 2nd, E. A. Millward.

Mr. Weston also held, on the preceding day, an examination for the Third Class Certificate of the B.B.K.A., three candidates presenting themselves.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4872.] The bee-keepers' harvest is over in the South of England, and his crop in most instances is garnered. We have an advantage over the farmer in being able to secure our crop, if the weather be fine, without waiting for the previous heavy rains to "dry out" before storing our produce. Unfortunately, our crop, from which we hoped so much, is a light one, and our plans have been full of disappointments for nearly every one—from king to cottager. We bee-keepers hoped for a good season, and laid ourselves out for a real "Coronation" year, which should stand as a record for the craft, and now, behold our failures! 1902 has been a record year in many of the things adverse to humanity, and to northern bee-keepers it has been disastrous. I have many friends and customers in Scotland, and the general complaint is the deplorable poorness of the honey-crop; some with close on twenty stocks will not have a finished section to take. Yet that hope which never faileth still lures onward, and they are wise generals who go on planning for another year. Some I know of are requeening where required, and thus are laying the foundation for success in 1903.

The shortage of the honey season should prompt those who have secured a crop to stand up for a fair price for their produce. I often revert to this subject, and hope by so doing not to occupy space which might be filled with glowing records of making 6s. 6d. to 7s. 6d. per dozen for the cream of the honey-crop in sections. The isolation of some bee-keepers, and, in many cases, the want of commercial education, renders them easy dupes to the hard dealer. I, myself, produce as many sections as anyone in Berks—perhaps in England—yet I have never had any over or left on hand when the new crop has come in. But I always endeavour to secure a fair price, as every one should, in my opinion, do, while leaving a fair margin to the retailer. Many articles dealt with at the stores yield a much smaller percentage of profit to the dealer than honey—either in jars or sections—and as the middleman is quite able to take care of himself the bee-keeper should try to do the same.

With more honesty existing amongst the craft we should be able to secure better prices all round, and by standing shoulder to shoulder ever ready, ever willing, to help any brother bee-keeper by a word of advice in things pertaining to the "get up" of his crop for the market, or by the best and safest mode of packing and transit, we shall be able to report progress as the years roll on. The pioneers of the craft cannot spread their own knowledge of bee-keeping broadcast to reach everyone, but much can be done by exhibiting at the various shows both in appliances and produce. There are fouud the genuine "technical classes"; there the "demonstrations" which appeal to the mind and become useful "wrinkles" well rubbed in and remembered by the novice who will get details of how to go about his work in making hives, and the many other things required in the modern bee-yard. He will there learn lessons in the "get up" of his produce, in the working up of his wax, in the clarifying of his run honey, and in the glazing of his sections.

The glazing of all sections is one of the stepping-stones to my own success in the way of sales. My customers often tell me they can buy cheaper, but not better, as the unglazed sections deteriorate so quickly in damp weather and also in windy, dusty weather. Yes, they get steamy, dusty, dirty, and in a short time watery, when exposed in a busy shop in an unglazed condition.—W. WOODLEY, *Beedon, Newbury.*

BRITISH BEE-KEEPERS' ASSOCIATION

AND ITS AFFILIATED ASSOCIATIONS.

[4873.] In your monthly *Record* for August our former colleague, Mr. H. W. Brice, has seen fit to make a most unwarrantable attack upon the British Bee-keepers' Association. According to his statement when asked, "What help is afforded to the bee-keeping community by this body? I am, perforce, compelled to answer none!" Now this is a telling and striking phrase, but Mr. Brice knows that it is entirely misleading. He cannot plead ignorance of the facts, for he writes having the last annual report before him, wherein is plainly set forth the work done by the Association during the year, together with a statement of the accounts. Will you, Mr. Editor, kindly allow me space to quote from that report which I regret most of your readers have not seen, as, unfortunately, so few of them support the parent Association by becoming members. Judging from his words, Mr. Brice seems to consider the holding of shows, and the giving of medals and certificates, to be the best way of helping the bee-keeping community; possibly your readers may agree with him

if so, turning to the report, we find that the Association had the management during the past year, of four shows, viz., the bee and honey department of the "Royal" Agricultural Show, which is the principal annual show of bee appliances in the kingdom; the honey department of the Grocers' Exhibition and of the Confectioners' Exhibition, in which are seen, at the Agricultural Hall, two of the best collections of honey shown for trade purposes; and the well-known and appreciated honey department of the British Dairy Farmers' Association, usually called *the* "Dairy Show," in London. On these shows was expended UPWARDS OF 50 PER CENT. OF THE TOTAL INCOME OF THE ASSOCIATION FROM SUBSCRIPTIONS, DONATIONS, AND ENTRY FEES: yet, forsooth, Mr. Brice would misinform the public, through your columns, that we do not help the bee keeping community. Though exhibitions and shows are a pleasant and popular method of promoting an interest in bee-keeping, yet, as a matter of fact, "showing" resolves itself more or less into prize-hunting by a limited number of able bee-keepers who are well situated as to locality; so in my opinion the money spent by the Exhibitions Committee in supporting them is not so well laid out as that which is spent by the Education Committee. It is in this latter department that the Association's work is starved by lack of funds and support, yet, by the aid of gentlemen who voluntarily undertook much of the work, no less than eighty-four candidates were examined for certificates at fourteen centres, from Cornwall in the South to Yorkshire in the North, Carmarthenshire in the West to Essex in the East. This work makes no noise in the world, is not advertised or heralded by the trumpets of speech-making, but it is yearly providing a supply of duly qualified men and women able to guide and instruct the cottager in the best and most modern methods of bee-keeping. Another £200 a year could be profitably spent in this department of the Association's work, including the instructional apiary, but to the extent of our means the Association does help in this way the whole bee-keeping community. Let me turn now to the consideration of Mr. Brice's statement that "it would appear that they have large or comparatively large sums in hand." The report says balance at bank, £57; of this £20 is held in trust for a specific object, leaving only £37 as our working balance. In the Post Office is a sum of £148, put by (as Mr. B. may remember) for the purpose of paying for the forthcoming edition of "Modern Bee-keeping," of which book we shall require 15,000 copies. Debtors, stock of books and pamphlets, the utensils and appliances of the Society make up the total of the assets. Where, then, are "the large funds" out of which free gifts to "some of the hundreds of such shows" can be made? They exist only in Mr. Brice's imagination.

It is an undoubted fact, the parent Association is suffering greatly, owing to the multiplicity of local shows and societies; because men of property and standing in the counties, having assisted the local society, refrain from supporting the parent body, although the latter is in touch with all that is best in the bee-keeping industry, and endeavours to work for all; yet it is grudged even the guinea affiliation fee by associations which it assisted into being.

In conclusion, let me assure your readers that the council are earnest in their desire to promote bee-keeping and assist bee-keepers, and to the full extent of the slender funds at their disposal they do so.

I fear, Mr. Editor, I have transgressed the limits of your space, or I would refer to some things we wish to do, but cannot at present attempt. Possibly at some future time you will kindly allow me the opportunity.—THOS. I. WESTON, Vice-Chairman B.B.K.A., *Wickham-Bishops, Witham, Essex, August* 19.

SUPPOSED WAX-MOTH LARVÆ

IN THE CAPPINGS OF HONEY-COMBS.

[4874.] A year or two ago my attention was called to numerous minute tunnels formed on the under-side of, and occasionally occurring as an excrescence through, the capping of some sections of honey exhibited at the Dairy Show. These tunnels were attributed to wax-moth larvæ (*Galleria cereana*), but a careful examination of the affected combs seemed to show that the work was done by a much smaller animal than the larva of the wax-moth. The animal, whatever it was, could not then be found. Last year, however, Mr. H. W. Seymour, of Henley-on-Thames, sent me some cappings in which the tunnels had been recently formed, and from these I obtained one or two small larvæ which were quite distinct from those of the wax-moth; indeed, they were unlike those of a lepidopteron.

If this meets the eye of Mr. Seymour, or of any bee-keeper who had combs injured this year in the manner described above, I should be very much obliged to him if he would send me some of the cappings, with any information obtainable, to enable me to complete my investigation. The cappings should be shaved off the comb with as little honey as possible, and placed between two pieces of section separated by two narrow strips to keep it from getting crushed in the post.

I may say that exposing the combs to the fumes of burning sulphur for a few minutes (a practice often employed in America for the purpose of bleaching them) would probably destroy the pest, but if we could trace its life history and so become acquainted with its habits, we should be in a much better position to attack it. My investigations were checked in an interesting stage through lack of material, and I should much like to complete them. It

is possible that on account of the coolness of the present summer the pest may be less common this year than usual.—F. W. L. SLADEN, F.E.S., *Ripple Court, Dover.*

HEATHER PROSPECTS.

[4875.] Just as I am commencing to write there are welcome signs of a change in the weather, which, in all seriousness, is badly wanted. Last year at this time I had secured between two and three hundred heather sections, and now I am actually feeding the bees—such a contrast as I hope I may not live to see again. Already several hives have died of hunger in this district, and unless we get a speedy and sustained improvement in the atmospheric conditions many more will have met a similar fate by the end of next week. It is really pitiable to see the bees crawl out of the hives in their enfeebled state, only to fall off the alighting-board on to the ground to die. Some of the bees in my own hives did not seem to have sufficient strength to reach the food I had given them, so I gave them a sprinkling of warm syrup, which seemed to have an instantaneous and beneficial effect on their drooping spirits, and was as refreshing to me as it was comforting to them. The heather is only beginning to come into bloom, and it is safe to say that without more warmth and sunshine not one half of it will ever show its colour. I have warned the bee-keepers in my immediate vicinity of the impending fate of their stocks if they are not closely watched and fed where necessary; but if the weather would only take up, and let us have a taste of brighter and better things—if only just to show it had not forgotten how to do it—the bees, which are fairly strong, would, I have no doubt, still give a good account of themselves. I do not want to appear too pessimistic, as it is not my nature to be so at any time, but the prospects are anything but encouraging, and with a lot of careless *keepers* of bees in this district, I am sadly afraid, unless our prophets send us better weather soon, bees will not be over-plentiful next spring.—R. T. TENNANT, *Thirsk, August* 23.

SOME "FACTS" ABOUT BEE-KEEPING.

QUEEN INTRODUCTION.

[4876.] "Facts are stubborn things"—very. I have lately encountered a few which I cannot in any way harmonise with other facts, and I shall be glad of any help that will enable me to do so. Here are the facts:—On the 9th inst. I divided a strong stock, and left the stronger portion queenless. That same evening I introduced a tested queen according to the method recommended by Mr. Doolittle. On examination six days later I found that the introduction had been unsuccessful—the one unsuccessful case in seven by the same method—and that the bees were rearing two queens. Examined the stock again on the 22nd, and was surprised to find eggs in some of the combs; not only eggs, but just a few larvæ, to which the bees had supplied tiny quantities of food. Those larvæ must have hatched from eggs laid three days earlier, so that we have the extraordinary circumstance of a queen being reared and laying in ten days from the date of the loss of the old queen. If we deduct from the said ten days the normal time between hatching and fertilisation, and the further period between fertilisation and egg-laying, we have practically no time left for the rearing of the queen.

What am I to think? There are no doubts as to the facts as stated: queenless on the 9th, introduction of queen same evening, failure on the 15th to find queen or eggs, finding on same date of two queen-cells, on the 22nd discovery of three-days-old eggs. To account partially for the young queen's precocity, I may say that the bees of the divided stock gave immediate signs of the discovery of queenlessness, and may, therefore, have commenced preparations for rearing a new queen even before the strange queen was offered them; that they were steadily fed from the first; that they had abundance of brood in all stages; and that, on account of receiving the major portion of the flying bees, they were crowded to overflowing on the seven combs to which they were confined. More light!—J. M., *Upper Boat, Pontypridd, August* 23.

[It will be interesting to have the opinion of queen breeders on the "facts" stated above, and we will be glad to have their views; but for ourselves the "circumstance of a queen being reared" (fertilised) "and laying in ten days" is a "fact" quite beyond our acceptance, and there must—we think—be some other explanation of the "circumstance" than that given by our correspondent.—EDS.]

WOLVERHAMPTON EXHIBITION.

THE ONTARIO HONEY EXHIBIT.

[4877.] Visitors to the Wolverhampton Exhibition who are interested in bee-keeping should not fail to examine the very excellent display of honey, both in comb and extracted, made by the Bee-keepers' Association of the Province of Ontario in the Canadian Pavilion. The evenness of the quality is most noticeable, and the sample the writer was allowed to taste is a high-class clover honey. As to price, it was stated to command 10d. to 1s. per lb. in Canada, and is being sold at the latter price in the exhibition. Messrs. J. D. Evans, the president, and W. Couse, the secretary of the society, are to be congratulated both on the quality of the exhibit and the tasteful manner in which it is displayed.—T. I. W.

HOME FROM SOUTH AFRICA.

Bee-keepers who are readers of the JOURNAL will be glad to know that Captain Wilfrid Gutch sailed for home in the *Kinfauns Castle*, which steamer left Cape Town on the 5th inst. He has served with merit from almost the beginning of the campaign. It will be remembered that Mr. Gutch, who was practising as a barrister, volunteered during the dark days that followed Magersfontein, leaving briefs and bees and everything behind, in order to hurry to the front when every man that could be had was needed. Being an expert rider, he was soon afforded the opportunity of distinguishing himself, and now he comes home with a captaincy and a commission.

Most thankful are we that he has been shielded from harm, and that he is returning with health and with honours.

BRIEF REPORTS.

EAST SUFFOLK.

On former occasions I have sent you short notes of the result of the honey crop in this locality. The season just passed has been an extraordinary one; to begin with it was very late, and little surplus was stored prior to Midsummer, honey then came in at an incredible rate and was of excellent quality. I had two hives situate about half a mile from the centre of this town which gave respectively 58 lb. extracted and fifty-one sections, both stocks were exceptionally strong. I believe no dark honey was stored in this locality until the limes were on—they were later than usual. My best stocks this year were those that last season had foul brood so badly that everything except the hives and bees themselves was burnt, bearing out a point so often alluded to in your papers of the desirability of new combs. I have now kept bees ten years and found nothing pays so much as a liberal supply of new frames with whole sheets of foundation—many, otherwise good bee-keepers are inclined to neglect or be lax in this respect, but I am convinced the money thus expended meets with a liberal return. The contributors to the *Bee-keeper's Record* have over and over again advocated renewing a portion of the brood frames of each hive yearly.—A REGULAR READER.

LINCOLNSHIRE.

With few exceptions my hives are yielding unsatisfactorily and several have given no surplus at all. These latter were in March and April most fit for work.—F. M. S., *Bourne*.

AYRSHIRE.

I am sorry to say that in our district the honey crop is hardly a third of last year. The heather is just coming into bloom at this date, but am afraid it is too late for the bees to gather much from it.—J. H., *Cumnock, N.B., August* 18.

P.S.—I also send you herewith a cutting from the *Glasgow Evening News* a short time ago. If you care to insert it in your useful journal, it will let our "southern friends" see what a bad honey-season we have had in Scotland this year, owing to the cold and sunless conditions which prevailed during June and July.—J. H.

The cutting sent reads as follows:—

"Bitter complaint is being made by honey-merchants in the city owing to the comparative failure of the summer season. The clover variety of this delicacy is, it would appear, a very scarce commodity, owing to the rainy conditions. Bee-keepers state that swarms 'coming off the hive' have in many cases perished outside from cold and rain, while those safely housed have—again owing to bad weather—been unable to gather food for themselves. Last year an exceptional season was experienced. The hope is held out that a warm autumn will stimulate trade in heather honey—perhaps, after all, the favourite variety—but in the mean time the remainder of last season's stock is being carefully husbanded, in view of a demand likely to be considerably beyond the limits of the supply."

CRAIGO, N.B.

Most of the bee-keepers in the locality have had their hives placed in charge of Mr. Middleton, of Haughend, Glenesk, for the heather season. The home or clover honey may be said to be a complete failure, the returns scarcely showing ounces for pounds of last year's crop. Clover all over the district had been very rich, but owing to cold days and frosty nights sweetness was awanting. The heather, which is beginning to burst, gives promise of a good crop, but without warm weather the result will most likely be the same as at home.

GLAMORGANSHIRE.

I am very sorry to have to admit that this season's crop here is nearly a complete failure. Not so much honey from four stocks and two swarms this year as I had from two swarms during last, but must say that what I have had, though small in quantity, is excellent in quality. We readers of B.B.J. will hear less this year of vain attempts to sell honey I am thinking.—CLOVER, *Neath, August* 15.

CHESHIRE.

Regarding the season here, it is not nearly so good as last year, owing to either cold winds or rain. Bees had little chance of getting any surplus from the fruit blossoms, or later from the hawthorn or limes; but for a couple or three weeks fine, when clover was out, honey has come in very slowly. However, we must be thankful for what we get.—EBOR.

Queries and Replies.

[2954.] *Removing Supers.*—Please excuse my troubling you again this week for answer in the B.B.J., but I notice in your monthly *Record* it is stated on page 128 that unsealed honey in shallow frames should be taken off not later than the first or second week in August. Acting on this advice I removed from one of my hives a super of seven shallow frames, several of the latter wholly unsealed, on August 17, leaving some sections still on. After extracting the shallow combs I put them back to be cleaned up by the bees, and to-day (24th) was going to remove them but was astonished to find the bees had started refilling the combs again with honey, so I left them on to extract again at a later date. 1. Did I do wrong in leaving them on a week for cleaning, or did I take them off too soon in view of the late season? 2. Should I do right in leaving them on another fortnight? There is a good-sized field of red clover blooming near here; is the honey likely to be from that?—S. G. S., *Beddington, August* 24.

Reply.—1. No, not exactly wrong, but the advice to remove unsealed honey in August is perfectly sound, for as a rule unsealed stores will be carried below into brood-nest if left on after the honey-flow has stopped. We have known scores of shallow-frames of unsealed honey lost to the bee-keeper by a few days' neglect of this precaution. The present season is, however, so abnormal in character that the words printed in same par a few lines higher up should have been taken into account, *i.e.*, "as soon as honey gathering is fairly over," all surplus must be removed. 2. We should not fix a given time for removal, but wait till the secretion of honey in flowers has about ceased for the season.

[2955.] *Transferring Bees.*—Will you kindly give me your advice on the following:—Last year I placed two skeps of bees on two bar-frame hives, each having ten frames fitted with full sheets of foundation. This was in the summer. I thought this year they would transfer themselves, and although the combs are worked out, and the queen has been below laying small quantities of brood, the bulk of bees are still in skeps, where there are slabs of sealed brood. I wish to get the bees into frame-hives. Should I drive them now, or leave it till April? I am afraid of "balling" at the latter time. Perhaps you will tell me when you think the best time to drive under the circumstances.—Perplexed, *Ashby-de-la-Zouch, August* 25.

Reply.—Before we advise as to wintering, it will be well to let us know how many frames of comb in lower hive are *fully drawn out.* In any case, however, you should not think of driving the bees from skeps till the "slabs of sealed brood" have hatched out. Write us again after examining the frames as requested, when we will endeavour to help you.

[2956.] *Clearing-up Wet Combs.*—Last evening, after dusk, I gave a stock of home-bred Italians, a rack of shallow-frames just extracted to clear up. Happening to go out about 11 p.m. the same night, I was surprised to find the alighting-board of this hive covered with a roaring, hissing mass of bees. Next morning I found a cluster under the hive, another on a tree close by, and the ground in front of the hive and at the back was almost covered by these Italians. I put the two clusters in the hive, and fixed "ladders" for those on the ground to climb up by. However, the space around the hive is to-night almost yellow with numbed bees. Are these "foreigners" of too excitable a nature to give dripping combs to? There was no question of robbing. I should be glad if your valued advice as to what to do with other combs I have, also how and when to unite two weak lots that it is impossible to bring side by side. They are now about twenty yards apart, with bushes between.—F. H. Brown, *Birmingham, August* 19.

Reply.—Italian bees are not as a rule more liable to get excited than natives, though they do at times act quite differently from what we are accustomed to. For instance, we have ourselves had an Italian swarm which, instead of clustering in a solid mass as all well-ordered bees should do, spread themselves out in scores of small clusters covering a good-sized potato patch, remaining so for a long time—in fact, needing to be scooped up in little lots and thrown together as when uniting. We should in future not give them wet combs to clean up till quite dark. With regard to "uniting," if the hives cannot be brought close together, you must take the chance of losing some bees.

Echoes from the Hives.

Woodbines Apiary, St. Brelades, Jersey, C.I., August 18.—Bees in this part of the King's dominions are now working well on the heather, which is in splendid condition, with every prospect of good results. The blackberry has now nearly finished blooming, and most other flowers are past, so that with the finish of the heather, in about three to four weeks from this, it will be time to take stock and balance up for the year, which—approximately—is only a medium one.—W. W. Kay.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, D.SC., F.R.M.S., F.Z.S., F.E.S., ETC.

Gazette Apicole de France.—The stingless bees of South America make little honey, the absence of the sting causing suppression of the

secretion of formic acid which alone preserves the honey.

Of the eighteen varieties of bees met with in the North of Brazil, only three have stings. Ants have long ago taught us the antiseptic character of formic acid. Many species build vast cities of vegetable débris containing numerous seeds which keep perfectly for years without the least signs of germination, development being suspended by the formic acid.

The English naturalist, Moggeridge, discovered that these seeds will germinate if the ants abandon their dwelling.

The Same.—The head of the Department of Agriculture for French Guiana has just been asked for a report on the rearing of bees for that province. The wild swarms being very numerous, we do not doubt that the investigation will lead to a successful issue.

Revue Internationale d'Apiculture.—Letter from the United States.—Our bees suffered much last winter in consequence of their having stored quantities of "honey dew." I feared a bad winter, as I thought the honey was not wholesome; but it was the first time we had seen this substance gathered in the month of September, and as there was also some good honey in the hives we did not think it needful to remove it, and feed with other honey.

During January and February the bees were confined to their hives by the weather. Then the mischief began to show itself; dysentery set in, and the bees died off in such numbers that a third of the colonies perished.

Hives placed near the Mississippi (which only gathered the honey of autumn flowers) wintered well, while the others tended as carefully suffered so severely.

Twenty hives where honey dew had been gathered were wintered in the cellar by way of experiment, but only four survived. From this we must conclude that good winter nourishment is of vital importance. The purest honey the least contaminated by extraneous matters should be given where the bees are confined for a length of time by severity of climate.

Last year everything was burnt up by drought, this year we see nothing but rain. Everything grows vigorously truly, and if we have sunny days by-and-bye, we may get an autumn honey harvest.

The Same.—Honey dew has been analysed and found to contain some quantity of dextrine, which (wholesome for man) appears to be the cause of trouble to the bees in the winter time when they cannot leave the hive. At other seasons it forms a perfectly harmless food.

Honey dew is formed during the great heats of summer under certain atmospheric influences. A sudden fall of temperature is a principal cause of its exudation.

Bee Shows to Come.

September 1 to 6, at Preston.—Annual show of the Royal Lancashire Agricultural Society in connection with the Festival week of the Guild Merchant (which recurs only once in every twenty-one years). In honour of the occasion a largely increased list of money prizes is offered for honey along with silver and bronze medals of the B.B.K.A. and also of the Society.

September 6, at Bramhall, near Stockport.—Honey Show in connection with the Bramhall and Woodford District Horticultural Society. Liberal prizes. Schedules from J. Turner, Glenwood, Bramhall, near Stockport. **Entries close August 30.**

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market.

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes**, including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull. **Entries close September 3.**

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead. **Entries close September 1.**

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent. **Entries closed.** Double fees to August 30.

September 10 and 11, in Waverley Market, Edinburgh.—Midlothian Bee-Keepers' Ninth Exhibition. Seven open classes. Prize money, 12s., 8s., 4s. Entry 2s. Schedules from W. Weir, Heriot, Midlothian. **Entries close September 3.**

September 11, at Yeovil, in connection with the Yeovil Agricultural Show. Two Open Classes—Single 1-lb. Section and Single 1-lb. Jar of Extracted Honey (no entry fee). Prizes, 12s. 6d., 7s. 6d., 5s., in each class. Schedules from Everton Watts, hon. sec., Mansion House, Yeovil, and G. W. Perry, 81, Middle-street, Yeovil. **Entries close September 8.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath. **Entries close September 1.**

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey. **Entries close September 1.**

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C. **Entries close August 30.**

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. (Open to Northumberland and Durham only.) Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close Sept. 8.**

PRESS CUTTINGS.

BIRDS AND BEES.

In a recent note in this column on the subject of "Bees and Birds" it was suggested that when the bird felt inclined to dine off the bee he selected drones, as they have no sting. Mr. W. G. Bridge now writes:—

I cannot assert that such is, or is not, the case in some instances, but have not detected that discrimination, although I have kept and studied bees for twenty-five years. Perhaps, however, it may be interesting to your readers if I relate a circumstance that came under my notice some two or three years ago. I was walking in my garden in mid-winter, when snow covered the ground, and, hearing a tapping noise, I looked, and a tit—a blue tit, I believe—perched upon the alighting-board of one of my hives. He picked up the bee that came out to ask "Who's there?" and flew to a currant bush close at hand to dissect and dine. That was course No. 1. Just then my daughter joined me. I told her what had happened. Presently the tit returned to the hive and repeated the process, and we counted fourteen such visits. I felt that he had dined well by that time, and signified it by throwing a stone to frighten him away. The snow under the tree was strewn with the remnants of the repast. Now, in this case the drone theory falls flat. Unless the hive is queenless, and in this case it was not so, there are no drones in the hive in winter. They have all been slain months before. The tit had fourteen worker bees, in spite of stings.—*Daily News.*

A swarm of bees at Princes Risborough (Bucks) have taken up their abode in the mouth of a large terra-cotta lion, placed over the entrance to a brewery. It is believed there are many pounds of honey deposited in the cavity. The incident gives a fair imitation of Samson's celebrated riddle, "Out of the strong cometh sweetness."—*Daily Telegraph.*

SWARM OF BEES HIVED IN A BUCKET.

A peculiar incident in connection with the local Coronation decorations was witnessed on Saturday afternoon in Queen-street, Cardiff. A festoon of artificial roses hung across the entrance to North-road, and in the centre, at the lowest point, hung what had the appearance to the casual passer-by of two large bunches of grapes. These had attracted a large number of bees, which were swarming around and settling upon them. However, when a portion of one of the bunches of grapes fell to the ground it was apparent that they were not grapes at all, but bees clustered together. Some one of an eminently practical frame of mind succeeded in "hiving" them in a capacious bucket. This was accomplished by gently and cautiously lowering the decoration till it nearly touched the ground, placing the bucket underneath the clustered bees, and when they were lowered into the bucket clapping a cover on.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** Referring to the inquiry for expert help by "S. M." (Croydon), page 339, last week, Mr. J. E. Short, certificated bee expert, 51, New Clive-road, West Dulwich, writes offering to do the work required if written to.

*** A correspondent, dating from Cleaton Moor, writes:—"Can you, or any of your correspondents, give us any information about the red clover bee's character?" For ourselves, we may say the "red clover bee" has not, in our opinion, much "character" to lose, seeing that we have but small faith in the "long-tongue" theory.—[EDS.]

EBOR (Cheshire).—*Varieties of Bees.*—We should say the bees are well-marked hybrids of the Cyprian and brown-bee cross. Of the three bees sent two are very well marked, while the third does not differ much from the ordinary or common brown-bee.

S. H. FOSTER (Oxon).—*Unripe Honey.*—Although honey that has not been "capped" or sealed over by the bees is, as a rule, "unripe," it does not follow that all sealed honey must be ripe. Therefore, your query, "What is unripe honey? Is it uncapped honey?" does not quite meet the case. Thin honey, whether sealed or unsealed, is more or less unripe, and should be kept in a warm place (temperature above 80 deg. Fahr.) for a few days to ripen it. The illustration on page 85 of "Guide Book" shows a honey-ripener, and explains the method of "ripening."

H. POTTS (Warrington).—*Foreign Queen Breeders.*—The person you name is well known on the Continent as a reliable breeder of Italian queens, and we have no doubt there is some good reason for delay complained of.

C. SCHOFIELD (Halifax).—*Soluble Phenyl.*—This should be obtainable at local chemists, but if not, write to Morris, Little, & Co., wholesale chemists, Doncaster, who will send it post-free for 6d.

Honey Samples.

T. W. F. (Glos.)—1. Sample sent is from mixed sources, and is hardly good enough for showing except at local show. We can hardly grade its colour in an earthenware jar, from which contents were leaking through insecure packing. A paper cover is obviously unsafe for liquid honey in post.

(Miss) J. M. B. (Atherstone).—Both samples are of good quality, No. 1 especially so. Your earlier samples must have missed in post, or been badly packed, as they failed to reach us.

BUMBLE PUPPY (N. Wales).—Honey is of excellent quality for either market or show-bench.

J. G. (Mottram).—Sample is unripe and only of medium quality. It would not keep

long, and cannot be regarded as a table-honey in its present condition.

S. G. S. (Beddington).—Honey is of good quality and suitable for showing in the "medium coloured" class.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

CONSTANT READER (Yorks).—The comb sent is reeking with foul brood—about as bad a case as we can imagine. There is nothing to be done with such a stock but burning the whole contents of the hive.

CONSTANT READER (Sheffield).—Sample contains decided foul brood in pronounced form. It is, however, not of very old standing in comb sent.

GEO. ALLEN (Derbyshire).—Comb contains nothing worse than pollen. If queen is satisfactory a driven lot of bees may be added to the stock at the first convenient chance.

SALOP (Kidderminster).—Foul brood is developing fast in comb, but as it is apparently a recent outbreak you should get the bees off their present combs and treat as advised in "Guide Book." When writing to B.B.J. please address "Editors." To address "W. B. Carr" is misleading and causes delay unless letters are for *Record*.

(Miss) E. WILLIAMS (Cornwall).—The sample No. 4 is badly infected with foul brood; No. 5 is much less serious, but it is diseased. The bees, however strong, will do no good if left to winter on combs containing the diseased larvæ, so they should be dealt with as directed in "Guide Book."

F. HAMSHAR (Sussex).—We think brood is only "chilled" in comb sent, but samples are unsuitable for proper examination.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

DRIVEN BEES, 1s. 6d. lb.; Queens, 2s. each. WOODS, Normandy. o 70

DRIVEN BEES.—Healthy Strong Lots, 3s. 9d.; 1892 Fertile Queens, 1s. 6d.; Three-frame Nuclei, 7s. 6d. SOLE, Potton, Sandy, Beds. o 69

HONEY WANTED in Exchange for Gent's Pneumatic CYCLE. Price £7 10s. APHIS, *B.B.J.* Office. o 66

FEW LAYING QUEENS for disposal, 2s. each. VALES, 17, Mount Pleasant-road, Alton, Hants. o 67

ANY QUANTITY SECTION HONEY Bought. 6s. doz. carriage paid. Wax 1s. 3d. lb. E. H. TAYLOR, Welwyn, Herts. o 57

A FEW healthy DRIVEN BEES, with Queen, 4s. per lot; on rail. W. H. HIGLEY, Bee Expert, 15, Mason-street, Kidderminster.

HOPS, 9d. lb.; 5 lb., 3s.; post free. HOLYER, Reynolds-lane, Tunbridge Wells. o 56

Prepaid Advertisements (*Continued*).

HEALTHY DRIVEN BEES on brood combs with Queen, 4s. lot. Free on rail. BROWN, 31, Canon-street, Shrewsbury. o 63

WANTED, one or two 2½ cwt. BARRELS, suitable for sending Honey by rail. W. KIGHT, Chisledon, Swindon. o 62

PROLIFIC QUEENS, 1902, Autumn reared from non-swarming Stocks, 3s. 6d., post free. TAYLOR, Northwick, Jockey-road, Wylde Green, Sutton Coldfield. o 65

WANTED, DRIVEN BEES, RUN HONEY and SECTIONS. Quote lowest price, to KER, Southridge, Harlow, Essex. o 68

DRIVEN BEES, with Queen, 3s. per stock. Orders booked in rotation. MARTIN, Bee-keeper, Wokingham, Berks. o 64

GUARANTEED pure ENGLISH BEESWAX, good quality. Send sample and lowest price for 28 or 56 lb. Carriage paid to F. ROUND, Chemist, Birkdale, Southport.

FOR SALE, Owner giving up, TWO STOCKS BEES on ten Frames, with Hives and two lifts each (one a Taylor's 20th Century Hive), 25s. each. KING, 36, Churchill-road, Walthamstow.

DRIVEN BEES, healthy, 3s. per lot, including Queen; also a few Strong Stocks in Bar-frame Hives complete, 22s. 6d. each. WILLIS, Oakley, Wimborne, Dorset. o 61

LIGURIAN BEES.—Strong stocks, grand workers, Ten frames with young Queen, 15s. each. Package returnable. PALMER, Tamar Cottage, St. Budeaux, Devonport. o 60

WANTED, any quantity of NEW HONEY in one lb. Sections, Clover, also Heather, clean, well-filled, and sealed. State price delivered for cash. M. CHARLTON, No. 42, Fawcett-street, Sunderland. o 59

FOR SALE, three strong STOCKS of BEES in Standard-size Bar-frame Hives, £1 1s. each; one Skep, 12s. 6d.; one "Windsor" Extractor, 10s. GEORGE SWINDELS, Cherry Tree Cottage, Romiley, Cheshire. o 58

SECTION GLAZING.—Just arrived, a large consignment of LACE PAPER, in neat patterns; White, 1 in. wide, 100 7d., 300 1s. 6d., 5,000 4s. 6d.; Pink, Green and Blue, 1 in. wide, 100 8d., 300 1s. 9d., 500 2s. 9d., 1,000 5s. LACE BANDS (lace both sides), 2⅞ in., 3 in. and 3½ in. wide; White, 100 1s. 3d., 200 2s. 4d., 300 3s. 3d., 500 4s. 6d.; Lace Bands in Pink and Green, 100 1s. 6d., 300 4s. 3d., 500 6s. All post free. An advance of 15 per cent. in price causes extra on previous prices. W. WOODLEY, Beedon, Newbury.

ABOUT SIX CWT. good light HONEY in tins or bottles. Offers. GARNER, Dyke, Bourne. o 42

WANTED, NEW SECTIONS (first quality). State lowest for cash. CHILTON, Polegate, Sussex.

1 CWT. of OLD HONEY, in two tins, 50s. E. HOLDER, Grosvenor Cottage, Bath. o 36

HEALTHY DRIVEN BEES with Queen, 5s. lot. Boxes returned. A. MORETON, Bee Expert, Leigh, Worcester. o 20

DRIVEN BEES, August delivery, 3s. 6d per lot with Queens; Boxes returnable G.W.R. PULLEN, Ramsbury, Hungerford. o 11

SPLENDID LOT of EXTRACTED HONEY and SECTIONS; tins returnable G.W.R. PULLEN, Ramsbury, Hungerford. o 10

HEALTHY DRIVEN BEES, 1s. 3d. per lb., not less than 4 lb. (Boxes to be returned.) E. LONG, Fulbourn, Cambs. o 34

DRIVEN BEES.—Strong STOCKS, with Queens, 5s. Package returnable. PHILLIPS, Spetchley, Worcester. o 35

HONEY WANTED (good extracted), in tins, light or medium. Price to APHIS, *B.B.J.* Office. o 54

HONEY WANTED (old granulated), in tins. Quantity and lowest price to APHIS, *B.B.J.* Office. o 53

26TH YEAR.—My noted small swarms, 5s. 6d., cases free. First-rate Queens in introducing cages, 5s.; delivered. ALSFORD, Expert, Blandford. o 8

Editorial, Notices, &c.

Death of Mr. Chas. Dadant.

Though less familiar to present-day readers than to those of the older school of bee-keepers, the name of Chas. Dadant is known wherever modern bee-keeping is practised. The firm of Chas. Dadant & Son, as makers of comb foundation, has been held in the highest repute for many years past, both in America and this country; and though Mr. Dadant had reached a ripe old age, his death will cause sincere regret as severing one more link which joins us to the most worthy veterans of the craft. In tendering our own sympathy, along with that of British bee-keepers, to his family, we are very pleased to print below an account written by the deceased gentleman himself for the *American Bee Journal* about ten years ago, and which is now reprinted along with a brief notice of his death, which took place, after a short illness, on July 16.

"I was born on May 22, 1817, in Vaux-sous-Aubigny, a French village of Champaign, near the confines of Burgundy. My father was a doctor of medicine. From the age of six to seventeen I went to school, living with my grandfather, who was a locksmith in the city of Langres.

"Then I entered as clerk in a wholesale dry-goods store, and ten years after I went into partnership with one of the owners of the store. We began successfully; we had earned some money when the French Revolution of 1848 came, followed by the Republic, which was destroyed by Napoleon III. and replaced by his Empire. For six years the trouble and the insecurity lasted, and determined us to quit the business. Then I succeeded to my father-in-law, who was a tanner, but bad luck continued to persecute me. The city of Langres, the ancient Audomatunum, which, several thousand years ago, was the capital of a people named the 'Lingones,' is situated on a high mountain, which overlooks its vicinity nearly on every side. Cæsar and the other Roman Emperors, at the time when the Roman Empire owned most of Western Europe, fortified Langres with strong walls, which were so well constructed that they are solid yet, after 2,000 years. These walls affording a protection to the inhabitants, the city was densely peopled, and its commerce was facilitated by a quantity of good roads, laid with stones and cement, and directed to every point of the compass.

"These Roman roads, as they are yet called, helped greatly the business of the city, which was very prosperous until the railroads came. Of course, these railroads refused to climb the high mountains, and built their depot two miles away, in the bottom of a deep valley. Then the city began to depopulate, and its buildings lost 90 per cent. of their value. Compelled to go elsewhere to get a living, I resolved to come to the United States.

"It was thirty years ago I came, a poor man with a family. Unable to understand a word of English, I subscribed for a weekly paper, and began to translate it with the help of a pocket dictionary. But the greatest difficulty was the pronunciation. I was soon able to write so as to be understood, but my spoken English was not intelligible. The French language has very little accent, while the English has the accent on one syllable in each word, and the scholars themselves do not always agree on the syllable on which the accent ought to be placed. Then imagine the difficulty of a foreigner! A great many store-keepers were amazed to see me explain in writing what I wanted, when they had been unable to understand my language.

"As I had already tried bee-keeping for pleasure in France, I began here with two colonies. What I knew of bees had satisfied me that a well-managed apiary would give enough profit to support a family, and the result proved that I was right.

"Soon after I began to rear Italian queens. Being able to understand the Italian language, and having been elected an honorary member of the Italian Society of Bee-keepers, it was an easy matter for me to try the importation of bees. But the conditions indispensable to success were not yet known, so I lost some money in the undertaking. Then I went to Italy, but the trip was a failure. I had about resolved to quit the business of importing queens when I began experimenting with Fiorini, and soon after all the queens arrived alive.

"But the care of 400 colonies, with the comb foundation business, was then beginning to give us—my son and myself—as much work as we were able to do, so we resolved to quit the importing business.

"We have since revised the book of our friend Langstroth, and published a French edition, which has had the honour of being translated into the Russian language.

"I am now seventy-six years old, and I have enjoyed, so far, good health, thanks to the care of my wife and of our children and grandchildren living with us *en famille*.—CHAS. DADANT."

SHOW AT BISHOP'S STORTFORD.

BISHOP'S STORTFORD AND DISTRICT B.K.A.

The annual honey show of the above association was held on August 13 in connection with the Horticultural Exhibition in the

gardens of The Grange, which were kindly thrown open to the public by permission of John Barker, Esq., J.P.

An interesting feature of the show was the lectures on "Bee Management" given in the County Council bee-tent by Mr. W. Debnam, the last being under the management of the hon. secretary, Mr. G. W. Sworder, assisted by Mr. C. J. Dodd.

The exhibits made up a very good display, though the entries were less numerous than last year.

Mr. W. Debnam was the judge, and made the following awards :—

Twelve 1-lb. Sections.—1st, C. H. Poulton, Aspenden, Herts ; 2nd, F. Calvert, Furneux, Pelham ; 3rd, C. Lodge, High Easter, Essex.

Six 1-lb. Sections.—1st, H. S. Cheader, Much Hadham ; 2nd, C. Lodge ; 3rd, C. H. Poulton.

Three Shallow Frames of Comb Honey.—1st, C. H. Poulton ; 3rd, G. C. Burgess, Bishop's Stortford (2nd not awarded).

Straw Super.—1st, R. Blake, Birchangel.

Glass Super.—1st, W. J. Kitson (weight about 50 lb.).

One Jar Extracted Honey (light).—1st, C. Lodge ; 2nd, A. R. Gold ; 3rd, W. J. Kitson.

One Jar Extracted Honey (dark).—1st, Mrs. Smith, Birchangel ; 2nd, W. J. Kitson ; 3rd, G. C. Burgess.

Beeswax.—3rd, C. Lodge (1st and 2nd not awarded).

SPECIAL PRIZES GIVEN BY W. P. NEAL, ESQ., PRESIDENT.

Honey Trophy.—1st, C. H. Poulton ; 2nd, C. Lodge.—(*Communicated.*)

HONEY SHOW AT LLANGOLLEN.

The honey show held on August 28 in connection with the Llangollen Flower Show was a great success. The entries numbered forty-one, and some really splendid exhibits were staged. Owing to the keen competition, the Committee granted an equal third prize in two classes. Mr. Stokes, of Chirk, acted as judge, and made the following awards :—

Six 1-lb. Sections.—1st, Ely Berry, Llanrwst ; 2nd, Alf. G. Preen, Nesscliffe ; equal 3rd, Jas. Clay, Wellington, and Chic Jones, Church Stretton ; h.c., S. Cartwright, Shrewsbury ; c., — Goodsell, Biddenden.

Six 1-lb. Jars Extracted Honey.—1st, Jas. Clay ; 2nd, Alf. G. Preen ; equal 3rd, E. A. Millward, Chaddesley Corbett, and Rev. E. Charley, Ince Vicarage ; h.c., Mr. Griffiths, Helsby ; c., Ely Berry.

Beeswax.—1st, Alf. G. Preen ; 2nd, Ely Berry ; 3rd, E. A. Millward.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4878.] *A New Section Extractor.*—Those I have seen are mere toys giving the bee-keeper an infinite amount of trouble with very poor results, and I have discarded them for some years, making the bees themselves do all the work of clearing out unfinished or faulty sections. Several objections might obviously be taken to such a practice, though the more serious of these may be considerably minimised by due care and tact. Still, this process of "extracting" is apt to lead to robbing unless very judiciously gone about, and out of this cross bees are engendered. Another drawback is that the work has often to be done when bees are disinclined to taste even exposed sweets owing to a full flow of honey being on. Therefore, to preserve the bees' and bee-man's temper, and do the work with efficiency, ease, and comfort, Mr. Meadows, perhaps, might invent a really good and reliable machine such as Mr. Woodley suggests. If he does, heather men will have reason to bestow a blessing on him.

Vicious Bees.—"C. H. H." (4860, page 323) contributes sound sense to this subject, and readers should pay particular attention to what he says on gentleness in manipulation as a *preventive* (not a cure) of viciousness. If he had really caught "Tartars" he would find that "moral suasion" had no effect on their temper or disposition. The cause for such ill-temper deserves some careful study. I am inclined to attribute it mainly to careless and injudicious intercrossing of different races. The very worst stock I ever dealt with was a cross where Cyprian blood had been mixed with that of hybrids produced from former extensive and indiscriminate blending in an injudicious manner of all races. Even Mr. Sole's "Bogie Man" could scarcely have stood an assault from them when they were on the war-path.

"*Tanging*" *Bees.*—Ovid wrote, probably about the first year of the Christian era :—"They report that honey was discovered by Bacchus. He was proceeding from the sandy

Hebrus, accompanied by the Satyrs, and they were come to the flowery Pangæum, when the cymbal-bearing hands of the attendants gave forth a clang. Behold, impelled by the sound, unknown winged creatures swarm together, and the sound which the brasses produce the bees pursue. Bacchus collects them as they flit about, and shuts them up in a hollow tree, and he has his reward in the discovery of honey." I had no idea that bee-tanging had an origin of such hoary antiquity. Now, since I wrote the foregoing, I have discovered that Pliny wrote that "to cause a swarm of bees to settle you must strike on brazen vessels." Who will discover an earlier origin for the process?

Alpine Flowers.—It is a fallacy to think that only in lowland dales and sheltered woodlands Nature strews her fair floral favours, for

> "Up among the mountains,
> In soft and mossy cell,
> By the silent springs and fountains
> The lovely wild flowers dwell."

The pretty Alpine campion is one of these, and it forms a dense matted turf with its beautiful bright purple flowers peeping up among the foliage like small stars. It is never seen in lowland ground, but is found only near the summits of our loftiest bens. I have seen it on the Cairngorm range, close beside an ice field. The moisture trickling from this seemed to give the needed sap to bring the plant to full fruition.

At the present time we have another flower deserving attention. This is the soldanella or snowbell, a dainty little plant about 3 in. high, bearing pendant fringed white or violet bells. They may at times be seen rising out of a bed of snow, much the same as we find the snowdrop in an inclement spring. During a snowstorm of some duration it will be observed that all round our hives the snow is melted by the heat from the colony, and a process somewhat similar enables the soldanella to work its way up from beneath the snowy covering. The breathing organs of the plant evolve so much heat that the encircling snow is melted, thus forming a cavity for the flower to blossom in, and the process goes on until it succeeds in reaching the surface and opens out into a lovely bell.

Several little gems of the *stellaria* seem to have their native habitat high up near the tops of our higher peaks, and I found a number well up to the 4,000-ft. line, near the summit of Ben Nevis. At present we have one of these lovely Alpine flowers "fruiting," from 2,000 to 3,000 ft. up our ben, in the shape of the wild strawberry. It is known by several other names, such as averns, cloudberries, and buckberries, but the botanical name is *Rubus chamæmorus*. They grow at a lower altitude than I have named, but seldom flower, and never fruit at a low elevation. It is the highest growing fruit I know, although blackberries, crowberries, and cranberries are all found about 2,000 ft. above sea-level.

Drunken Humble-Bees.—Here is another extract on this subject from "The Arcadian Calendar," in August *Strand*:—"The humble-bees are busy, as usual. The humble-bee occasionally varies industry with over-indulgence, but habitual intoxication is unknown; for this excellent reason, that he who weakly yields to the seduction of such strong waters as the honey-dew on the lime leaf falls drunk and incapable to the ground, and dies without a chance of reformation." That the event occurs by the bees sipping the *honey* from the flower, and not the *dew* from the leaf, is easily proved, as it takes place in seasons when no honey-dew is perceptible.—D. M. M., *Banff*.

SOME "FACTS" ABOUT BEE-KEEPING.

ON QUEEN INTRODUCTION.

[4879.] The "facts" given by your correspondent "J. M." on page 345 may be explained in at least two ways:—

1. The introduced queen might not have been turned out of the hive. Your correspondent does not say that he found her dead, and the fact that there were no eggs, but queen-cells, in the hive a few days later could easily be explained. Probably the queen was "balled," or she was otherwise prevented from laying eggs—a very common occurrence with a newly introduced queen; and this, coupled with the fact that stimulative feeding was kept up every day, would fully account for the bees forming and nursing queen-cells, which they would not be likely to destroy until the queen commenced laying eggs. Not being able to find the queen is negative evidence, upon which an expert learns to place very little dependence.

2. An unfertilised queen from another hive may have found her way into the hive before or after her nuptial flight. This occasionally happens in a queen-raising apiary where there are a number of nuclei containing unfertilised queens at the same time.

The first is by far the more likely hypothesis. It is absolutely impossible for a queen to be raised from a worker-larva, and fertilised within ten days. I have found that a queen requires at least four or five days from the time she emerges from her cell before she can be fertilised, and the period is usually quite a week. This year it has been more often a fortnight with us, and I have one or two queens that have been out of their cells over three weeks before they commenced egg-laying; however, they produced worker-brood, showing they were properly fertilised.—F. W. L. SLADEN, *Ripple Court Apiary, Dover, August* 29.

[4880.] The "facts" in connection with the introduction of his queen—as detailed by your correspondent "J. M." on page 345—will to

most bee-keepers appear fables, as his conclusions are at variance with all scientific investigation on this subject. I believe the true solution of the mystery is simply that the fertile queen was successfully introduced, although "J. M." failed to see it on his examination. The hive, being strong, proceeded to rear two queens on the same principle on which stocks rear queens previous to swarming. These would be subsequently destroyed. The eggs and larvæ seen were evidently the produce of the introduced queen. It may be asked if the queen introduced was a "laying" one. If newly fertilised, the phenomenon has an explanation which is obvious even to the novice in bee-keeping.—J. S. D., *Duns, August* 29.

A CHEAP HOME-MADE HONEY PRESS.

[4881.] I would like to inform your readers how I made a simple, effective, and cheap honey press. It has always been a trouble to me to get all the honey out of wax cappings and broken combs. I have formerly used a small iron screw press which fitted into my wax extractor, but found it a tedious job.

The following is a terse description of a press I made this month, and which gives me complete satisfaction.—Two pieces of pitch pine, 1½ in. thick and 2 ft. by 8 in.; two joiners' bench screws, 2½ in. in diameter. Through the two pieces of pitch pine I bored two 2½-in. holes, 17 in. from centre to centre. After putting the screws through pitch pine plates, I put them through the side of a bench with screw blocks on the inside. This will keep press in proper position.

I use a bag made of cheese cloth to hold the wax cappings or broken comb. Place the bag between the pitch pine plates, and squeeze home. This will extract nearly all the honey, and the total cost of the press need not exceed 4s.—LANCELOT QUAYLE, *Glenmay, Isle of Man, August* 28.

EXTRACTING UNFINISHED SECTIONS.

[4882.] In reply to Mr. Woodley's note in B.J., page 323, as to a section extracting cage being needed, I would draw his attention to page 480 of "Cheshire," Vol. II., where he will find a cage such as he wants very clearly illustrated and described, and he can make it himself. I would only add, use *tinned* wires and *tinned* wire cloth, which is better in every way than zinc. I made one of these cages five years ago, and find it just the thing for extracting unfinished clover sections previous to their being returned to the bees for refilling.—G. M. S., *Keswick, September* 1.

HONEY OF BEES.

[4883] H Jimero, in "Boll. Society Espan. Hist. Nat. II." (1902), pages 98-102, gives the results of a number of saccharometric and polarimetric observations on various kinds of honey from different parts of Spain.

The above is gleaned from the *Journal* of the Royal Microscopical Society of London for August, in case any of your readers should be interested in the question.—R. HAMLYN-HARRIS, D.Sc., &c., *Tipton, Staffs, August* 23.

INSURANCE SCHEME.

[4884.] In answer to your Devon correspondents in this month's *Record*, I would like, with your permission, through the columns of the BEE JOURNAL, to tell them that the insurance scheme is now working smoothly, and that many bee-keepers have taken advantage of it to guard themselves against claims for damage done to "third parties" by their bees. As, however, some intending insurers were prevented from doing so by the unfortunate hitch which occurred at the first start of the scheme, it has been decided to extend the time of joining the scheme till October 1. The conditions are those published in the B J. of May 8, 1902, page 181, and full particulars can be obtained from the Secretaries of the County Associations, or from Mr. E. H. Young, 12, Hanover-square, London, W. The period covered by the insurance will still remain as at first, viz, to August 1, 1903.—T. I. WESTON.

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

Miss Mary Elsie Bott, whose home-apiary forms our bee-garden picture this week, is one of the few lady readers who have obtained the expert's certificate of the B.B.K.A., and as it was our privilege, about a year ago, to recommend her for a "good pass," we know something of her ability as a bee-keeper. The following "notes," written at our request, are so full and interesting that we need add nothing to them :—

"My bee-keeping experiences began in the year 1898, when I undertook to help my brother in the management of his apiary, then numbering six hives and two skeps. Owing entirely to lack of knowledge, my first year could hardly be called successful, seeing that I only took 63 lb. of honey and lost (by starvation) two stocks.

"Determined to remedy, if possible, this state of affairs, I bought all the best books dealing with apiculture that I could learn of, joined the Essex Bee-keepers' Association, read its literature, and commenced to study in

earnest; but the more I read the more I wanted to know about this most interesting study. Foul brood has twice shown itself in my apiary, but fortunately, having some knowledge of the treatment of this disease, both the affected stocks were saved, and no others became affected. This is not a first-rate district for honey production. My brother, having no time to help with the bees, gave them all to me, and as swarms were made the hives numbered fourteen. In addition to the apiary depicted in the picture, I have an out-apiary located about a mile away from here, by the riverside, surrounded by orchards and gardens, where the bees 'make food upon the summer's velvet buds.'

MISS M. ELSIE BOTT'S APIARY, CHELMSFORD, ESSEX.

"All the hives and skeps are numbered, and have their corresponding numbers in the 'record book,' where a regular account is kept of expenditure and the amount of honey taken. For ladies especially I think the study and practice of apiculture a most interesting, healthy, and profitable pursuit, although I should keep bees solely for the love of them. The natural dislike and fear we all experience about the 100 per cent. hypodermic injection of formic acid is soon overcome. A gentle but firm hand is all that is required when manipulating, as bees rarely if ever sting unless needlessly annoyed.

"This year, when taking a swarm, I had an awkward experience. They had settled on a branch of a high pear tree, too slender to support a ladder. Nothing daunted, however, I mounted some high steps, with a skep in one hand, a garden-rake in the other, and, getting a good hold of the branch with the rake, I endeavoured to catch the falling mass in the skep, but had misjudged the distance! They fell on its side, it overbalanced, the skep went down, the bees went up! The gardener, who was watching, fled for his life, making sundry unorthodox remarks about 'bees' and the ways of women in particular. Not being able to move either up or down, the bees began to settle all over the steps, while I stood perfectly still and awaited results. After a time, during which I was growing 'sadder and wiser,' they commenced to rise, and in a short time settled in the same place as before. I then got a man who could climb to use a saw, and eventually, after about an hour ('a shining hour?'), I secured the swarm.

"In the springtime I was greatly interested in a pair of great tits (*Parus major*) enjoying many a meal at my expense. They tapped on the floor-boards of the hive, and when a poor half-torpid bee came out to ascertain the cause of this disturbance he was immediately caught up and carried off. The carefully extracted stings laid on the roof of a certain hive indicate clearly that other bee-lovers live about here who also know something about 'The Anatomy and Physiology of the Honey Bee,' and (though from a somewhat different standpoint) are as attached to the little *Apis mellifica* as myself."

BISULPHIDE OF CARBON

FOR DESTROYING WAX MOTH.

The article by Professor A. J. Cook, entitled "C.S.," which appeared on page 390, I read with much interest. Before commencing to use this drug moth-worms were one of the most difficult problems I had to contend with, for they have always been very numerous here. I have had sets of combs, and even hives themselves, almost cut to pieces by moth-worms, in cases where the bees deserted their hives, and it was not discovered until some time afterward. When comb-honey is removed from the hive, a close watch must be kept, for moth-worms are sure to develop on some of it, and if their depredations are not checked a large part of it will soon be ruined.

Some persons seem to think these moth-worms appear only on comb-honey that contains more or less bee-bread, but I regret to say that this is far from being the case here. They are much more apt to appear on combs that contain a few cells of pollen, but I have had hundreds of sections of comb-honey that did not contain a cell of bee-bread badly cut up and damaged by moth-larvæ.

A number of years ago I sold 2,000 lb. of white clover comb-honey to a large retail grocery concern in Minneapolis. The honey was shipped about the middle of August, by express. I got a special rate, and went along with the shipment, as it had to be transferred twice, and I wanted to see that it was handled as it should be. It was not crated, simply cased in 24-lb. cases, two of which were fastened together. Not a comb was broken *en route*. The firm was much pleased with the honey, and contracted for more to be delivered later.

About three weeks after I returned home I received a letter from them, saying the honey was being all cut to pieces by worms, and that they would hold me fully responsible for not only the price of the honey, but also for damages to them in loss of time, customers, and numerous other things, for, they said, they could prove the worms were in the honey when I delivered it; they had kept it in a place free from worms, and there were no other worms of that kind in the city.

I had been afraid the moth-worms might damage it before they were able to sell it all, for it was shipped soon after being removed from the hives, and had not been sulphured, sulphur being then the only remedy I knew of. It would have done no good, for the honey was free from worms at the time it was shipped, but contained moth-eggs which developed into larvæ soon afterwards. The fumes of the sulphur have no effect whatever on these eggs, at least not what we can subject them to without discolouring the honey.

The fumes of bisulphide of carbon not only kill moth-worms, but utterly destroy the vitality of all eggs that the comb may contain. A good many seem to question whether it does kill the eggs as well as hatched larvæ. I know, from a large amount of actual experience, that it does.

Last year I sold to a large grocery house in a near-by city nearly 7,000 lb. of honey. This firm had considerable experience with, and loss from, moth-worms developing in honey after they bought it, and on this account would not buy any very large amount at one time, although besides a large retail trade they had quite a jobbing trade from the Dakotas. Last year one of the firm was at my place to buy honey; if it were not for worms they could handle a large amount. He was very sceptical about my assertion that the worms would not appear on it. In order to get him to buy the amount which he did, I had to get the bank in our town to guarantee him the full amount he paid for the honey, on all that the moth-worms appeared upon.

The reason I have mentioned this incident is on account of a curious, and possibly important, incident connected with it. This firm expected to need about 2,000 lb. or more for their retail trade, and this amount I put up in "T" supers. The honey was all hauled to them by team, and by using supers it saved me the price on shipping-cases for this amount.

Last spring I went to that city to gather up a load of empty supers, cases, and cans, and found that this firm still had considerable of the honey I sold to them. I helped take out what was left in the supers and pack it in boxes. While one of the firm and I were doing this he spoke about my honey keeping so much better than the other they had. He said that was why they had so much of mine left. They had bought a number of small lots from different bee-keepers around there, and towards spring it all commenced to granulate or candy in the comb, and they wanted to get rid of that first. I was unable to find a trace of granulation in any of that I sold them. Now, this honey I sold them was all subjected to the fumes of bisulphide of carbon for three and a half hours, or longer. Did this prevent granulation, or have anything to do with its not granulating? If I live I shall know in a year from now, or less, for this season I shall subject samples of both comb and extracted honey to these fumes and keep them over winter, besides similar lots that have not been treated.

Some may remember that I described how, last fall, I had subjected the winter stores of a number of colonies to these fumes in order to find out whether honey so treated was affected or rendered unfit for winter food. I have not space here to go over the matter, but in a former article I explained why it was very important for me to know whether honey so treated was safe for winter food, and I am glad to say that it is. The colonies on these stores wintered in good shape, and this proves, also, I believe, that honey so treated is per-

fectly wholesome, for if trace enough of these deadly fumes remained in it to make it injurious to health, it would surely have affected the bees during the long confinement of winter.

Before closing I will say a few words about the manner of using this drug. I have described this before, but I still see it recommended by many to pile up hive-bodies containing combs, and treat them by putting some bisulphide in the upper stories. Such a method may kill moth-worms and eggs all right, or it may have no effect on them—it all depends on how tight the bottom cover and hive-bodies fit, how much of the drug is used, and the length of time the combs are exposed to the fumes. I have a tight box made out of matched lumber that is large enough so that a number of supers of section-honey or hive-bodies containing combs can be placed in and treated at one time. When this box is closed up it is nearly air-tight, and I know pretty nearly to a minute how long it takes to kill moth-worms in it, but whether the vitality of the eggs is destroyed as soon as the worms themselves I do not know. For this reason I have always treated the combs much longer than was necessary to kill the worms.—C. DAVENPORT, *Southern Minnesota, in "American Bee Journal."*

Queries and Replies.

[2957.] *Uniting Queenless Bees.* — I am desirous of uniting a queenless stock to one with a fertile queen, and therefore ask:—1. If the queenless bees are reduced to the condition of a swarm, will it be necessary to observe the conditions as regards moving by degrees to a close proximity with the other stock? The two hives are about 7 ft. or 8 ft. apart now, with another one midway between. The queenless stock has been so a month or five weeks, in which case the "Guide Book" says the fertile queen in the other hive had better be caged. 2. Is this absolutely necessary, as I feel hardly competent to capture and place the queen in cage?—S. M., *Sheffield, August* 27.

REPLY.—1. It would very much reduce the risk of loss to bee-life by doing as proposed, and if the further precaution is taken of altering the outer appearance of the hive by placing a small branch of a tree across the entrance little or no loss will occur. 2. Though not absolutely necessary, it is far better and safer to do as directed, and if a pipe-cover cage is used the operation of caging is a very simple one.

[2958.] *Starting Bee-keeping in Canada.*—I am thinking of going out to Canada next year, and should like to have your opinion with regard to a few things connected with Canadian bee-keeping, for although intending to be a farmer, I should like to keep some hives there. I have now eighteen stocks and have always found the bees to pay very well, my highest yield from one hive being 112 lb. 1. Would you advise me to take one or two stocks out with me, or would it be better to buy them out there? 2. Could you also tell me if there is any trouble in marketing the honey, and also about what price it brings? 3. Do you know of any association in Canada that I could join? I see by the BEE JOURNAL that a lot of honey is brought to England from abroad. I should like to know if much of it comes from Canada? Thanking you for past advice.—H. T., *Tring, Herts, August* 27.

REPLY.—By way of reply to several queries enumerated above, we refer you to page 345 of our last week's issue, and think if you could make it convenient to visit the Wolverhampton Exhibition and see the display of the Ontario Bee-keepers' Association, it would be well worth while to have an interview with the Canadian bee-keepers in charge of the Ontario exhibit. They could inform you more fully and reliably on bee-keeping in Canada than any one in this country.

[2959] *Moving Bees to New Location.*—I have started bee-keeping, and at the end of May I purchased a stock from a gentleman leaving the neighbourhood, who lived about a mile and a half by road from my home. I have left the stock in his garden, fearing if I brought it home the bees might find their way back there and die. Do you think I might venture to bring them home now, or would you advise letting them remain where they are a bit longer? The stock swarmed two days after I had purchased, and threw off a fine strong swarm which I brought home and hived in a frame-hive with nine frames. Some weeks ago I put sections on, but the bees have not commenced work in them. Last week they cast out a large number of drones. Do you think they ought to have worked in the sections, or is it a bad honey year? I think the latter is the case in this district. I should like to join the Kent and Sussex Association if you would kindly give Secretary's name and address.—C. T. J., *Dartford, Kent.*

REPLY.—1. It will be best to leave the bees where they are till active flying for the season ends. You will then lose no bees. 2. Mr. H. W. Brice, 100, Brigstock-road, Thornton Heath, is Hon. Sec. of the Kent and Sussex B.K.A.

Echoes from the Hives.

Horsford, Norfolk, September 1. — The honey crop in this district is hardly so heavy as last year owing to the wet season. The quality, however, is very good, and with the latter surely we bee-keepers ought to stand up for a better price than that at which honey is now selling.—HY. THOS. MARCH.

Bee Shows to Come.

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market.

September 10 and 11, at Hull.—Honey show in connection with the Hull and District Horticultural Association, at the Artillery Barracks. **Seven open classes**, including one for Honey Trophy, prizes £2 and £1; also classes for single 1-lb. section and single 1-lb. jar of extracted honey, with **free entry.** Schedules from F. W. Thompson, hon. sec., 8, Albert-square, Ella-street, Hull.

September 10 and 11, at Bebington, near Birkenhead.—Cheshire B.K.A. Show, in connection with Birkenhead and Wirral Agricultural Society, on New Show-ground. Numerous classes for Hives, Honey, and Wax. Substantial prizes. Schedules from A. H. Edwardson, 6, Hamilton-square, Birkenhead.

September 10 and 11, at Derby.—Derbyshire B.K.A. Twenty-first Annual Show of Hives, Bees, and Honey on the show ground of the Derbyshire Agricultural Society. Schedules from R. H. Coltman, Hon. Sec. D.B.K.A., Station-street, Burton-on-Trent.

September 10 and 11, in Waverley Market, Edinburgh.—Midlothian Bee-Keepers' Ninth Exhibition. Seven open classes. Prize money, 12s., 8s., 4s. Entry 2s. Schedules from W. Weir, Heriot, Midlothian.

September 11, at Yeovil, in connection with the Yeovil Agricultural Show. Two Open Classes—Single 1-lb. Section and Single 1-lb. Jar of Extracted Honey (no entry fee). Prizes, 12s. 6d., 7s. 6d., 5s., in each class. Schedules from Everton Watts, hon. sec., Mansion House, Yeovil, and G. W. Perry, 81, Middle-street, Yeovil. **Entries close September 8.**

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances. Specially increased prizes and medals for Coronation year. Further particulars shortly. Schedules from Hon. Secretary, Henry W. Brice, 100, Brigstock-road, Thornton Heath.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c. Twenty-four classes (ten open to all). Increased prizes and medals. Schedules from F. B. White, Secretary, Marden House, Redhill, Surrey.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the sixth Annual Exhibition and Market of the Grocery and Kindred Trades. Numerous classes for comb and extracted honey and beeswax. **Open to all British Bee-keepers.** Special attention is directed to the new **Honey-selling Classes.** Schedules from H. S. Rogers, Secretary, 27, Leadenhall-street, London, E.C.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. (Open to Northumberland and Durham only.) Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c. Schedules from Mr. Wm. C. Young, Secretary, 12, Hanover-square, London, W. **Entries close Sept. 8.**

CONVERSATIONS WITH DOOLITTLE.

BEE PARALYSIS.

"Good afternoon, Mr. Doolittle. How is the honey crop this year?"

"Very light indeed, so far. We have really had only three days when nectar was brought into the hives more than about what was needed to support the bees. July 2, 4, and 6 it did not rain, and the atmosphere was just right for the secretion of nectar in the clover-blossoms, and the bees worked with a will. In fact, those days seemed like a flow from basswood, and the bees went into the sections, drew out the foundation very rapidly, and I had hopes of quite a yield of section honey, even though it had rained twenty-eight out of the thirty days of June. But it came on rainy again, so the bees could not get out of the hives till the 11th, when a north and east wind sprang up, which is always unfavourable to nectar secretion, especially with clover, and that was the last of our white honey."

"Do you think you will have any sections completed?"

"From the little I have examined I think the most of the bait sections are nearly capped over, so that there will probably be from six to eight sections to the hive. But it has been so slow in capping that there will be little that will class as even No. 1 honey."

"Sorry you did not have a better crop. But that was not the real reason for my coming (by letter) to see you. I fear my bees have paralysis. At some of the hives many bees seem to be swollen up, and seem to shake as if they had the ague, some of them being smooth and shiny. There is a lot of brood in these hives, but in some of them the bees are apparently dying faster than they are replaced with the emerging brood. In front of two hives the bees lie dead in heaps. Do you think the trouble is paralysis?"

"From your description I think there is little doubt that your bees have paralysis."

"How long has this disease been known?"

"I do not remember hearing anything about it previous to the earlier eighties; and when it was first heard of it was under the name of 'the nameless bee-disease,' if that can be called a name. For a time it made very rapid strides, till there were very few apiarists who were not familiar with it, either in their own apiary or in that of some neighbour, during the nineties. But since the ushering in of the twentieth century the disease seems to be on the wane, or, at least, very little is said about it now."

"What is the cause of this trouble?"

"That was the *great* question in the minds of all those who had it in their apiaries; for where the cause can be fully understood a remedy is always soon found; but unless I have been remiss in my reading, no one seems to be sure that he knows what the cause is. Many guesses have been made; but as the years have rolled by they have proved to be only guesses, and I doubt our having anything reliable as to the cause of this plague to the bees."

"But can you not tell me what I can do to help these colonies?"

"Such telling would be little more than guesswork. When the disease first made its appearance some of the knowing ones told us

the whole trouble came from not letting the bees have access to all of the salt they wanted, and from this it was said that, if a strong brine was made and sprinkled over the bees and combs, it was a certain cure."

"Did you try it?"

"Yes, I tried it, and it was tried by bee-keepers quite generally; but it was soon apparent that it was of no use as a general remedy. Then salicylic and carbolic acid were recommended, not only as a cure for the disease, but as a preventive as well; but when the general public came to use them, and apiarists whose knowledge was the practical side of bee culture, the verdict was, 'Had little or no effect.' Therefore, so far as I know, 'What can I do to help them?' still remains an unanswered problem."

"I have been told that the trouble comes from the queen. What do you think of this?"

"In reply to this I must say, as I did to the other remedies, that there were those, some years ago, who told us the whole trouble came through the queen, and that, if the queen was killed and another given in her place, then, as soon as the bees emerged from the new queen, the disease would begin to grow less and less; and when all the bees from the original queen had died, the colony would be free from the disease. This was tried more largely than any other remedy; but after a thorough trial of the same by hundreds, if not by thousands, it was found that, in the majority of cases, such change had no effect whatever."

"What was your experience with this remedy?"

"The first time I tried it the colony kept along about the same till fall came on, when it got better, and I thought I saw a ray of hope in the matter, although I had noticed that diseased colonies which lived through till then generally got better in the fall. But the next year I had another colony come down with it, the worst of anything I had ever had; and to fully test the matter I took their queen away and gave her to a healthy colony, at the same time giving the diseased colony a young laying queen. The result this time was that the colony to which I gave the diseased (?) queen went right on in a prosperous condition, with no signs of the disease, while the diseased colony showed no abatement of the disease, they becoming so weakened in August that they were likely not to repel robbers, when they were united with another colony."

"Did you have any further experience with this matter?"

"Yes. For a time every colony that was put on a certain stand, when set from the cellar, had the disease during the summer, so I concluded that location had something to do with it, or that the trouble came from some infection which arose out of the ground at certain places. But after a few years the colonies set on this stand were all right, and one on the opposite side of the apiary contracted the disease; so that again I came to the conclusion I knew nothing definite about this trouble."

"You speak as though the disease was on the wane, and this gives me courage. How long since you have seen any symptoms of the disease?"

"I have seen very little of it since 1897. One colony showed some few bees diseased, with swollen, shiny abdomens, and shaking motions, in 1900, and that is the last I have seen anything of it. There was a time when bee-keepers quite generally believed that this disease would ruin our pursuit; but you are the only one who has asked me about the matter in over a year; and I have seen very little in print on the matter during that time. I do not think you need to worry over the matter if only a few of your colonies have the disease. But I am glad you called our attention to this, for it is well for all to know that there is such a disease as bee paralysis, and I hope that whenever and wherever anything new is discovered in the matter it will be told of in the bee papers. Perhaps when the editor of *Gleanings* sees this he will tell us what he has heard in the matter of late."—G. M. DOOLITTLE in *Gleanings* (American).

WEATHER REPORT.

WESTBOURNE, SUSSEX.
August, 1902.

Rainfall, 4·65 in.	Sunless Days, 1.
Heaviest fall, 1·24 in., on 18th.	Below average, 69·3 hours.
Rain fell on 17 days.	Mean Maximum, 66·6°.
Above aver., 2·26 in.	Mean Minimum, 51·5°.
Maximum Temperature, 77°, on 29th.	Mean Temperature, 59·5°.
Minimum Temperature, 43°, on 11th.	Below average, ·5°.
Minimum on Grass, 27°, on 11th.	Maximum Barometer, 30·35°, on 22nd.
Frosty Nights, —.	Minimum Barometer, 29·77°, on 19th.
Sunshine, 149·6 hours.	
Brightest Day, 22nd, 11·5 hours.	

L. B. BIRKETT.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. N. (Bainbridge).—*Honey comb Designs.*—Instructions for making these have appeared several times in our pages, an admirable

specimen being illustrated in our issue of May 2 last year, which will be forwarded for three halfpenny stamps.

W. H. W. (co. Wexford).—*Removing Bees from Chimneys and Trees.*—It is not a very difficult task to remove bees and combs from a disused chimney if you can get at them, though it is more of a bricklayer's job than a bee-keeper's. It is only necessary to use plenty of smoke in keeping the bees quiet while cutting away the combs, "driving" being out of the question. When you tell us that "two persons" have already made an attempt on the chimney and the hollow tree, respectively, and have both failed after getting well stung, it seems advisable to try and get the opinion of an experienced bee-keeper, who could inspect the two lots of bees. As they have been located where they now are for about seven years it may be guessed that the bees are pretty safe from outside intrusion, and to judge safely with regard to mode of procedure without some sort of inspection is, to say the least, almost futile.

J. U. T. (Dover).—*Leaving Unfinished Sections on Hives.*—It will do no harm to leave the contents of unfinished sections for the bees' use. Some bee-keepers make a rule of doing this, and find it answers very well.

Honey Samples.

CUMNOCK.—The "black stuff" you inquire about is simply honey gathered from natural sources, but dark in colour, as is much of the autumn-gathered honey this year.

T. J. (Devon).—Honey is of good colour and flavour, but rather thin, though it shows signs of granulating.

E. CUTT (Lincoln).—Honey is of good quality, and, though not granulated solid, is quite ripe and will keep well. There is no accounting for the varying manner in which honey granulates.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

(Miss) G. H. M. (Chepstow).—The comb sent is affected with foul brood. We should have been spared trouble and expense if your parcel had been correctly addressed. We forwarded it to an advertiser in Beds. (*nom de plume* is "Expert," B.J. Office), only to have it returned, and find it was intended for Editors.

O. C. (Moberley).—The sample of old and black comb was unsuitable for diagnosing, there being only a single sealed cell to judge from, and no brood at all. The cell referred to, however, contains foul brood of old standing.

E. E. S. (Sutton Coldfield).—Foul brood is just developing in comb received, but the disease may, of course, be present in the spore-stage in some combs to have caused the outbreak.

*** Some letters, queries, and reports on Suspected Combs, Honey Samples, &c., are unavoidably held over till next week owing to Editor's enforced absence from Town.*

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

DRIVEN BEES, 2s. 9d. lot., or 1s. lb. Box returned. J. BARNES, Burwell, Cambs. 0 74

CLOVER HONEY, in 28-lb. tins, 6½d. per lb. Tins 1s. each. Sample, 2d. J. GEARY, Barwell, Hinckley. 0 79

FINEST EXTRACTED HONEY, Sainfoin and White Clover, in tins, 6d. lb. Sample 2d. CRAM, Chorleywood, Rickmansworth, Herts. 0 73

HONEY, EXTRACTED (English), 50s. per cwt. on rail Manea. Tins returnable. F. PEPPER, Manea, March. 0 77

SUPER FOUNDATION MACHINE and Dipping Tank, EXCHANGE Honey or Driven Bees. HOLMES, Brunswick-road, Plymouth. 0 83

ON OR BEFORE SATURDAY NEXT ONLY. 30 lots healthy Driven Bees, 2s. 6d. each, or 1s. per lb. SOLE, Expert, Potton, Sandy. 0 81

WANTED, CLEAN, WELL-FILLED SECTIONS, and Light EXTRACTED HONEY. Quote lowest, carriage paid. GIBSON, Ballygowan, Belfast. 0 82

EXTRACTOR (two-frame), good working order, cost 22s. 6d., 17s. 6d. WHITE CLOVER HONEY in 28-lb. tins, 6½d. lb., on rail. Light colour, very thick. ERNEST EDDISON, Shirecaks, Worksop, Notts. 0 75

WANTED, DRIVEN BEES, HONEY, or APPLIANCES, for High-class Dragon Pigeons. Giving up fancy. Approval if necessary. Apply, FAIRALL, 27, Newbridge-street, Wolverhampton. 0 78

FOR SALE, Nine well-made STANDARD HIVES, healthy bees, plenty stores, at £1 each; will take £8 10s. for lot. Owner giving up. Apply, WESTMACOTT, Park-place, Blockley, Worcestershire. 0 80

FOR SALE, 20 healthy STOCKS of BEES in well-made ten-frame hives. Lift for two crates (section), waterproof roof. All interchangeable. Headed with Queens of current year. On rail, 22s. 6d. each. SHARP, The Apiary, Brampton, Huntingdon. 0 76

ABOUT SIX CWT. good light HONEY in tins or bottles. Offers. GARNER, Dyke, Bourne. 0 42

WANTED, NEW SECTIONS (first quality). State lowest for cash. CHILTON, Polegate, Sussex.

WANTED, any quantity of NEW HONEY in one lb. Sections, Clover, also Heather, clean, well-filled, and sealed. State price delivered for cash. M. CHARLTON, No. 42, Fawcett-street, Sunderland. 0 59

Editorial, Notices, &c.

ROYAL LANCASHIRE AGRICULTURAL SOCIETY.

THE GUILD MERCHANT SHOW AT PRESTON.

After a lapse of twenty years, the ancient Guild Merchant held its historic festival at Preston, on September 1, and five following days. As is known to most dwellers in the North of England, the "Guild Merchant" has for more than 700 years continued this memorable meeting at regular intervals of twenty years, and ever since its institution the Agricultural Society has held its annual show at Preston in the Guild week. We are glad to be able to record a very favourable week, so far as regards weather, for the trades and other processions which depend so largely for their success on weather conditions.

The Agricultural Show—as may be supposed—was a splendid success, the attendance on the show days being very large indeed, and the Society provided very liberally for a big show in the Honey department by offering liberal prizes in money and medals. But for the bad season in the north, the honey show would, no doubt, have been a record one. As it was, the display was very satisfactory, in view of the adverse conditions. The Honey Trophies—of which no less than ten were staged in the two classes—made up a goodly show of themselves.

The appliance classes were good, as were also the interesting and practical exhibits.

The steward appointed for the bee department was Mr. Geo. Rose, of Liverpool, but owing to the large number of exhibits he had in the various classes, Mr. Williamson, sec. to the L.B.K.A., undertook to act as steward, and attend to the judges while the latter were making the awards.

W. Broughton Carr (London), and Mr. Jas. Cragg judged the exhibits and made the following awards :—

OPEN CLASSES.

Trophy of Honey and Honey Products (6 entries).—1st (£2 and B.B.K.A. Silver Medal), John Helme, Norton Canon, Weobley, R.S.O.; 2nd (£1 10s.), Wm. Dixon, Beckett-street, Leeds ; 3rd (15s.), Geo. Rose, Great Charlotte-street, Liverpool.

Twelve 1-lb. Sections (7 entries).—1st (£2 and B.B.K.A. Bronze Medal), W. Woodley, Beedon, Newbury ; 2nd (£1), A. W. Weatherhogg, Willoughton, Lincoln ; 3rd (10s.), Jesse Garratt, S. E. Agricultural College, Wye, Kent ; v.h.c., Rev. R. W. Lamb, Burton Pidsea Rectory, Hull.

Twelve 1-lb. Jars Extracted Honey (16 entries).—1st (£2 and B.B.K.A. Certificate), S. Temblett, Andover ; 2nd (£1), Wm. Cookson, Hesketh Bank, Preston ; 3rd (10s.), W. Woodley ; v.h.c., A. W. Weatherhogg, C. A. Miller (Leighford, Staffs.), and Alf. G. Preen (Nesscliffe, Shrewsbury) ; h.c., E. C. R. White, Newton Toney, Salisbury.

COUNTY CLASSES.

Trophy of Honey and Honey Products (4 entries).—1st (£3 and Silver Medal of the Lancs B.K.A.), Geo. Rose, Liverpool ; 2nd (£2 and Bronze Medal of the Lancs B.K.A.), Robt. Rymer, Hesketh Bank ; 3rd (£1), Wm. Forrester, Huyton, near Liverpool.

Twelve 1-lb. Jars Extracted Honey (19 entries).—1st (30s.), Jas. Ball, Hesketh Bank ; 2nd, Robt. Rymer ; 2nd (10s.), Thomas Eaves, Hambleton, Poulton-le-Fylde ; 3rd (5s.), Mrs. J. Stirzaker, Stalmine, Poulton-le-Fylde ; h.c., J. Jones, Carnforth, and F. Sharples, Rainhill, Liverpool ; c., Wm. J. Garlick, Hesketh Bank ; W. A. Cook, Tarleton ; Luke Collinge, Leyland ; and Th. Ormesher, Westhead, near Ormskirk.

Twelve 1-lb. Sections (4 entries).—1st (30s.), John Hale, Croston, near Preston (2nd and 3rd not awarded).

OPEN CLASSES.

Twelve 1-lb. Jars Extracted Dark Honey (7 entries).—1st (£1 10s), Mrs. E. Berry, Llanrwst, North Wales ; 2nd (10s.), J. Jones, Carnforth ; 3rd (5s.), Th. Walker, Esthwaite, Hawkshead.

Twelve 1-lb. Sections Heather Honey (5 entries).—1st (£1 10s.), Wm. Dixon, Leeds ; 2nd (10s.), Th. Walker.

Beeswax, in handy and attractive form for shop sale (11 entries).—1st (15s.), E. C. R. White, Newton Toney ; 2nd (10s.), John Berry, Llanrwst ; 3rd (5s.), Hugh Berry, Ty Newydd, Llanrwst ; c., Wm. Forrester, Huyton.

Most Attractive Exhibit of Confectionery, &c. in all of which honey is used.—1st (30s.), Wm. Dixon.

Suitable Outfit for a Beginner in Bee-keeping, price not to exceed £2 10s. (5 entries).—1st and 2nd, Geo. Rose ; 3rd, Abbott Bros., Merchant's Quay, Dublin.

Complete Frame Hive for General Use (6 entries).—1st, E H. Taylor, Welwyn, Herts ; 2nd, Geo. Rose, Liverpool ; 3rd, Abbott Bros., Dublin ; h.c., Geo. Rose.

Honey Extractors (5 entries).—1st, 2nd, and 3rd, Geo. Rose.

Interesting and Instructive Exhibits in Bee Culture (5 entries).—1st (£2), Wm. Dixon ; 2nd (£1 10s.), H. Edwards, Sunningdale, Berks ; 3rd (£1), Geo. Rose.—(*Communicated.*)

THE CONFECTIONERS AND ALLIED TRADES ANNUAL EXHIBITION AND MARKET.

HONEY SHOW AT THE AGRICULTURAL HALL.

The tenth annual International Exhibition and Market of the Confectioners and Kindred Trades, held as usual at the Royal Agricultural

Hall, London, was opened on Saturday, the 6th inst., and will be continued till the 13th. In view of the fact that many important exhibitions held this year have been somewhat adversely affected by outside influences in no way connected with the aims or objects of the promoters, it was gratifying to see a favourable prospect of a successful week.

The total entries have been in every way satisfactory, and we had hoped to see bee-keeping well to the fore by a display that would have been memorable in the annals of the craft. But the fates—or, rather, the weather—has been all against us, and although the entries were very satisfactory for what has come to be spoken of as a season of honey-failure, they fell short of what we should have liked to see. This was especially regrettable in the new Selling Classes instituted this year, which—as may be guessed—were poorly represented. There was, however, some satisfaction in seeing the classes for extracted honey of excellent quality represented by over a thousand 1-lb. jars in all, together with a fair display of very good sections.

The class for three shallow-frames of comb-honey for extracting, with twelve entries, also produced some excellent frames of comb, far better, as a whole, than any we have previously seen this year. Pressure on our space and the late hour at which the judging was finished on Saturday evening compels us to defer a fuller notice of the show till next week, as we had no time to do more than get through the awards. We hope, however, to again refer to the show in our next issue after a second visit.

Mr. W. Broughton Carr, London, and Mr. T. I. Weston, Wickham Bishops, Essex, officiated as judges, and made the following

AWARDS.

Display of Honey (comb and extracted) and Honey Products, shown in suitably attractive form for a tradesman's window (6 entries).—1st—£4 and B.B.K.A. Silver Medal, Jas. Lee & Son, Silver-street, High Holborn, and Monk's Acre, Andover; 2nd—£3 and B.B.K.A. Bronze Medal, Mrs. Waller, Pen Park, Westbury-on-Tryn, Bristol; 3rd—£2, R. Brown, Somersham, Hunts; 4th—£1, H. W. Seymour, Market Place, Henley-on-Thames; h.c., W. Woodley, Beedon, Newbury; c., A. W. Rawlins, Stourbridge.

Twelve 1-lb. Sections (10 entries).—1st—£2 and B.B.K.A. Certificate, A. Barber, Comberton, Cambs; 2nd, W. Woodley; 3rd, A. W. Weatherhogg, Willoughton, Lincoln; 4th, H. W. Seymour; 5th, R. Brown; v.h.c, H. H. Pyke, Newbury, Bucks; and S. Bailey, Horsham, Sussex; h.c., G. Walker, Wendover, Bucks.

Twelve 1-lb. Heather Sections (4 entries).—1st and 2nd not awarded; 3rd—15s., Jas. Waddell, Wooler, Northumberland; 4th—10s., H. Rowell, Winchfield, Hants.

Three Shallow Frames Comb Honey for Extracting (12 entries).—1st—£1 5s., R. Brown; 2nd—£1, H. W. Seymour; 3rd—15s., W. Woodley; 4th—10s., F. R. Court, Sittingbourne, Kent; v.h.c., A. Barber, Comberton, Cambs.; J. Lee and Son, and G. W. Kirby, St. George, Bristol.

Twelve 1-lb. Jars Light Coloured Extracted Honey (35 entries).—1st—£2, J. Lee and Son; 2nd—£1 10s., R. Brown; 3rd—£1, G. Hickford, Felstead; 4th—10s., W. J. Longley, Basingstoke, Hants; 5th—5s., W. Woodley; v.h.c., H. H. Pyke; F. G. Brown, Corsham, Wilts; H. W. Seymour; S. Temblett, Andover, Hants; G. F. O'Fflahertie, Nettleswell, Harlow; C. Lodge, Chelmsford; W. Loveday, Hatfield Heath, Harlow; and J. Smart, Andover, Hants; h.c., W. F. Fake, Gt. Massingham, King's Lynn; G. Walker, Wendover, Bucks; W. Wesley, Desford, Leicester; L. McNeil Stewart, Hextable; J. Sopp, Crowmarsh, Wallingford, Berks; and T. Blake, Broughton, Hants.

Twelve 1-lb. Jars Medium Coloured Extracted Honey (20 entries).—1st—£1 5s., J. Lee and Son; 2nd—15s., R. Brown; 3rd—10s., H. W. Seymour; 4th—5s., H. Rowell; v.h.c., H. Samways, Maesybont, Llandebie, R.S.O., and Miss J. Smith, Duxhurst, Reigate, Surrey; h.c., G. W. Kirby and G. Walker.

Twelve 1-lb. Jars Dark Coloured Extracted Honey (7 entries).—1st—£1, H. W. Seymour; 2nd—15s., L. McNeil Stewart; 3rd—10s., J. G. Goodwin, Mayfield, Withington, Hereford; C. J. Adams, West Haddon, Rugby.

Twelve 1-lb. Jars Heather Honey (6 entries).—1st—£1 5s., T. Richards, Church Greasley, Burton-on-Trent; 2nd—£1, L. McNeil Stewart; 3rd—15s., H. Rowell.

Twelve 1-lb. Jars Granulated Honey (15 entries).—1st—£1 5s., J. Hookway, Wellington, Somerset; 2nd—£1, W. Loveday; 3rd—15s., R. Brown; 4th—10s., T. Blake; v.h.c., C. Lodge, High Easton, Chelmsford; h.c., H. W. Seymour; F. S. Smith, Louth, Lincs, and J. Smart; c., Rev. H. Goffe, Caistor, Lincs.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Package, suitable for retail counter trade (8 entries).—1st—£1, Jno. Berry, Llanrwst, North Wales; 2nd—15s., E. C. R. White, Newton Tony, Salisbury; 3rd—10s., H. W. Seymour; 4th—5s., J. Lee & Son; h.c., R. Brown; c., T. Hood, Pickering, Yorks.

Beeswax, judged for quality of wax only (18 entries).—1st—£1, J. Berry; 2nd—15s., H. W. Seymour; 3rd—10s., F. Harris, Sibsy, Boston; 4th—5s., W. Patchett, Caistor, Lincs; v.h.c., W. Loveday and W. Woodley.

HONEY SELLING CLASSES.

Extracted Honey in Bulk by Sample with price (8 entries).—Certificates of merit awarded to:—E. Gristwood, Norton Court Lodge Sittingbourne; A. Curnow, Marazion, Cornwall; J. H. Seabrook, Longfield, Kent; S. Temblett, Andover, Hants; W. J. Longley

Ramsdell, Basingstoke, Hants; F. R. Court, Greenstreet, Sittingbourne, Kent.

Extracted Honey in 1-lb. Jars—by Sample with price—(6 entries).—Certificates of merit awarded to :—A. W. Rawlins, Hagley-road, Stourbridge; W. Hibbert, High-street, Sutton-in-Ashfield; C. Lodge, High Easton, Chelmsford; W. Loveday, Hatfield Heath, Harlow, Essex; R. Brown, Somersham, Hunts.

STAFFORDSHIRE B.K.A.

ANNUAL SHOW.

The annual show of the above Association was held, in conjunction with that of the Staffordshire Agricultural Society, at Uttoxeter on August 27 and 28, and it is reported that, favoured by fine weather, the meeting was an all round success.

The bee and honey section was, as usual, under the management of the Staffordshire B.K.A., and, notwithstanding an adverse bee season, was one of the most attractive features of the show. The entries reached the satisfactory total of 130, some exceeding good exhibits being staged. The Rev. J. F. Buckler, Bidston Rectory, Cheshire, judged the exhibits and made the following awards :—

Trophy of Honey in any Form (not to exceed 100 lb.).—1st, Harry Wood, Paradise, Lichfield; 2nd, Elihu Clowes, Blackbrook, Newcastle; 3rd, R. H. Coltman, Blackpool-street, Burton-on-Trent.

Twelve 1-lb. Sections.—1st (and B B.K.A. sil. medal), E. White, Market Drayton; 2nd (and bronze medal), Harry Wood; 3rd (and certificate), John Kendrick, Stone.

Twelve 1-lb. Jars Extracted Honey.—1st, Joseph Tinsley, Chebsey, Stafford; 2nd, E. Clowes; 3rd, G. W. Buttery, Wheaton Aston, Stafford.

Twelve 1-lb. Jars (Dark) Extracted Honey.—1st, Harry Wood; 2nd, G. H. Mytton, Lichfield; 3rd, W. Williams, Lichfield.

Six 1-lb. Jars Granulated Honey.—1st, G. W. Buttery; 2nd, Harry Wood; 3rd, Thomas Harper, Uttoxeter.

Three Frames of Comb Honey for Extracting.—1st, G. W. Buttery; 2nd, John Stubbs, Rickerscote; 3rd, W. Tildesley, Stone.

Observatory Hive with Bees and Queen.—1st, Wm. Hutchinson, Leek; 2nd, E. Clowes; 3rd, John Beech, Burntwood, Lichfield.

Beeswax, not to exceed 3 lb.—1st, John Stubbs; 2nd, D. H. Bird, Whittington, Lichfield; 3rd, T. Harper.

Twelve 1-lb. Sections (Labourers only).—1st, Jos. Leadbetter, Tillington, Staffs; 2nd, J. Lymer, Stone; 3rd, W. W. Dempster, Lichfield.

LABOURERS' CLASSES.

Twelve 1-lb. Jars Extracted Honey.—1st, Jos. Leadbetter; 2nd, W. W. Dempster; 3rd, John Lymer.

Six 1-lb. Jars Extracted Honey.—1st, Jos. Leadbetter; 2nd, W. Tidesley, Stone; 3rd, W. W. Dempster.

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, John Stone, Cubley, Sudbury; 2nd, Rev. E. Charley, Ince Vicarage, Chester; 3rd, W. Woodley, Beedon, Newbury.

Twelve 1-lb. Glass Jars of Run or Extracted Honey.—1st, S. Temblett, Andover, Hants; 2nd, T. S. Holdsworth, Kirton Lindsey, Lincs.; 3rd, J. Pearman, Penny Long Lane, Derby.

Twenty-four 1-lb. Jars Extracted Honey.—1st, John Smart, Andover; 2nd, E. Clowes; 3rd, Joseph Tinsley.

Collection of Hives and Appliances.—1st, E. H. Taylor, Welwyn, Herts; 2nd, R. H. Coltman, Station-street, Burton-on-Trent.—(*Communicated.*)

CHESHIRE B.K.A.

ANNUAL SHOW.

The honey department of the Cheshire Agricultural Society's Show at Hyde, on August 23, was under the management of the County Bee-keepers' Association. There was a large falling off in the number of entries as compared with 1901, but an ample explanation was forthcoming in the unfavourable season which Cheshire bee-keepers have experienced, and in the somewhat inaccessible locality in which the show was held. The judges were Mr. T. D. Schofield, Alderley Edge, and the Rev. E. Charley, Ince Vicarage, Chester, who made the following awards :—

OPEN CLASSES.

Frame Hive.—1st and 2nd, W. Cartwright, Moore, Warrington.

Twelve 1-lb. Sections.—1st, W. Woodley, Beedon, Newbury; 2nd, J. Pearman, Penny Longlane, Derby; 3rd, W. Ratcliffe, Barthomley, Crewe.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Pearman; 2nd, A. G. Preen, Nescliffe, Shrewsbury; 3rd, W. Woodley; reserve, S. Temblett, Andover.

Beeswax.—1st, J. Berry, Llanrwst; 2nd, J. Pearman; 3rd, W. Ratcliffe; h.c., A. G. Preen.

MEMBERS' CLASSES.

Six 1-lb. Sections.—1st, W. Ratcliffe; 2nd, A. Thorpe, Wistaston; 3rd, J. T. Fernley, Cheadle, Hulme.

Twelve 1-lb. Jars Extracted Honey.—1st, P. H. Rawson, Market Drayton; 2nd, S. Eaton, Audlem; 3rd, W. Gainerston, Altrincham; reserve, J. Astbury, Kelsall; h.c., G. Lambert, Comberbach, and R. Gray, Bremborough.

Six 1-lb. Jars Granulated Honey.—1st A. Thorpe; 2nd, R. Gray; 3rd, J. Astbury reserve, P. H. Rawson.

DISTRICT CLASSES.

Six 1-*lb. Jars Extracted Honey.*—3rd, J. T. Fernley. (1st and 2nd prizes not awarded.)—(*Communicated.*)

HONEY SHOW AT AMMANFORD.

The annual show of the Horticultural Society was held at Ammanford, and in connection therewith prizes to the value of £10 10s. was offered in the Honey section of the show. The entries were not so numerous as last year. Unfortunately, the season has been a bad one; otherwise, such a prize list ought to have produced a greater competition.

Mr. S. Jordan judged the exhibits, and made the following awards :—

Single 1-*lb. Jar Extracted Honey.*—1st, A. Hamer, Llandilo; 2nd, W. Woodley, Beedon, Newbury; 3rd, L. Hopkins, Aberystwith; 4th, S. Temblett, Andover; 5th, F. J. Moore, Tewkesbury.

Single 1-*lb. Section.*—1st, W. Woodley; 2nd, A. Hamer; 3rd, Gideon Spearman, Colesbourne; 4th, W. Hatliff, Thoresway, Caistor; 5th, Toddington Orchard Co., Winchcombe, Glos.

Single 1-*lb. Jar Extracted Honey* (*Local*).—1st, A. Hamer; 2nd, H. Samways, Maesybont, Llandebie.

Three 1-*lb. Jars Extracted Honey* (*Light*).—1st, A. Hamer; 2nd, W. Woodley; 3rd, S. Temblett.

Three 1-*lb. Jars Extracted Honey* (*Dark*).—1st, Thos. Roberts, Garnant; 2nd, H. Samways; 3rd, Miss Edith Bevan, Maesybont, Llandebie.

Three 1-*lb. Sections.*—1st, G. Spearman; 2nd, W. Woodley; 3rd, Toddington Orchard Company.—(*Communicated.*)

HONEY SHOW AT MONTGOMERY.

In connection with Montgomery and District Horticultural Society's Show on August 28 an excellent display of honey was made. The local classes did not receive many entries, as the season has been a poor one in the district, but in the open classes there was good competition and honey of splendid quality was staged.

Mr. Pickard, U.C.W., Aberystwith, was the judge, and made the following awards :—

OPEN CLASSES.

Six 1-*lb. Jars Extracted Honey.*—1st, E. R. Nash, Smarden, Kent; 2nd, S. Temblett, Andover, Hants; 3rd, A. Preen, Nessclifle; v.h.c., W. H. Brown, Shrewsbury; h.c., J. Carver, Wellington, Salop; S. Cartwright, Shawbury, Shrewsbury.

Six 1-*lb. Sections.*—1st, W. H. Brown; 2nd, A. Preen; 3rd, Russell Oakley, Christchurch; v.h.c., J. Carver; h.c., S. Cartwright.

LOCAL CLASS.

Six 1-*lb. Jars Extracted Honey.*—1st, J. Watkin, Luggy; 2nd, Rev. E. Brown, Montgomery; 3rd, Dr. Morgan, Montgomery.

Six 1-*lb. Sections.*—1st, Rev. E. Brown; 2nd, H. Jones, Walcot; 3rd, E. Mostyn Pryce, Gunley.—(*Communicated.*)

HEREFORDSHIRE B.K.A.

ANNUAL HONEY FAIR.

Under the auspices of the Herefordshire Bee-keepers' Association, the eighteenth annual honey fair was held in the Butter Market, Hereford, on September 3. Altogether there were 792 lb. of honey staged, which was considerably in excess of that in 1900, with only 392 lb., but the amount was below that of last year, when 1,254 lb. were staged. It would seem that Herefordshire is better off in respect to quantity than are some other counties. In the opinion of the judge, the exhibition all round was a very good one, bearing in mind the bad season. The collections and trophies were of much merit. The average price for honey was 10d. to 1s. per lb.

Mr. E. J. Burtt, of Gloucester, was the judge, and made the following awards :—

Trophy of Honey, not exceeding 100 *lb.* (open).—1st, J. Helme, Norton Canon; 2nd, T. M. Meadham, Huntington; 3rd, W. Tomkins, Burghill.

Exhibit of Honey not exceeding 50 *lb.* (novices).—1st, A. W. Burgoyne, Lyonshall; 2nd, J. E. Williams, Moorhampton.

Twelve 1-*lb. Jars Extracted Honey* (open).—1st, J. Helme; 2nd, A. W. Burgoyne; 3rd, T. M. Meadham; h.c., J. Grindrod, Whitfield; c, W. Tomkins.

Six 1-*lb. Jars Extracted Honey* (novices).—1st, Rev. J. B. Hewitt, Upper Sapey; 2nd, J. Grindrod; 3rd, A. W. Burgoyne; h.c., A. W. Burgoyne; c., J. E. Williams.

Twelve 1-*lb. Sections* (open).—1st, J. Helme; 2nd, J. E. Williams; 3rd, W. Tomkins.

Six 1-*lb. Sections* (novices).—1st, J. E. Williams; 2nd, J. G. Godwin, Withington; 3rd, R. Grindrod.

Exhibit of Honey in any Shape not Exceeding 40 *lb.* (cottagers and non-previous winners only).—1st, A. W. Burgoyne.—(*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES BY THE WAY.

[4885.] There has been some improvement in the weather since September came in; harvesting has been in full swing; the reaping-

hooks have been hunted out and re-sharpened for cutting a good portion of the crop by hand labour. The children, too, have again taken their small share in the fields with their parents, drawing the "bands" to bind the sheaves. The few days of sunny weather has started the bees to work gleaning amongst the few scattered flowers that have put forth their blossoms since the fragmentary summer of 1902. Though we bee-keepers shall get only a remnant, let us hope it may be both warm and dry all through the month.

Wasps are again somewhat numerous, and are a constant worry to the bees whose store of winter food they are so anxious to share. Indeed, it is only by constant guarding that these pests of the hive bee can be kept out of the hives by reducing entrances to an inch or so. This enables the bees to resist the intruders. Bottles containing "wine-dregs" with a piece of paper tied over the mouth and a central hole will catch many, but an evening spent destroying the nests soon reduces the numbers of the enemy. The quickest plan, however, is to place a small lump of cyanide of potassium at the entrance of the wasp nest, this avoids trouble in digging out and dispenses with stings.

Honey Prices.—The two shows at the Agricultural Hall, London, will, no doubt, give some slight idea of the prices asked by bee-keepers for their produce, as there are special "selling classes," and certificates of merit will be awarded to all exhibits of good quality. Bee-keepers who are so often grumbling that there is no market for honey will do well to send on their goods marked at a fair price; fair to the producer, while allowing the retailer a fair return also. The season has been a poor one, and the crop, in many instances, will be cleared shortly; therefore, in pricing the dozen sections or dozen jars the weights, quality, and "get up" should count when the dozen sections (and a fair sample dozen should be sent, not all picked ones) weighs 12 lb., they are in good saleable condition, that is, if properly sealed and built out to the wood of the section. If in jars, the style and cost of the jars should also be taken into account when fixing the prices, the "nominal" pounds are, of course, not worth so much when filled as the full pounds, while that in tie-over jars is, of course, less in value than screw-capped jars. I express no opinion as regards price, as it is impossible to do so without seeing the honey.

Section Extracting.—There seems to be a few who would be glad to have cages made with projections to take the pressure off the attachments of the comb to the wood of sections, judging by the letters and references I have received since I referred *to* the matter in a former "note." I have for many years extracted twelve sections at a time in my "extractor," six in each cage, and by using pieces of perforated zinc to take the bearing of combs have managed fairly well, but when honey is thick the combs get damaged and, no doubt, others who take trouble to save everything in the shape of bee-work done for future use will have noticed how very much more fragile some combs are than those built from a different honey. The wax in some sections is much stronger or tougher than in others, which is very thin, fragile, and brittle; and a new section cage, to take six on each side, would, I feel sure, be a useful addition to our bee appliances. A friend at Keswick reminds me that "Cheshire" mentioned such a cage. It is so many years since I saw "Cheshire's" work, that I do not remember to have seen anything of the matter.

The honey show in this country is the only chance the bee-keeper has of exchanging views and ideas with his brethren in the craft; comparing notes, talking over the season's work and doings, giving his experiences, and hoping to receive some useful information in return. Some trades are able to have their "Welcome Clubs" in the buildings in which their show is going on. Could not some such rendezvous be arranged by bee-keepers, or are we so poor and few in number that the home is beyond our hope?—W. Woodley, *Beedon, Newbury.*

QUEEN INTRODUCTION.

THE "FACTS" CONNECTED THEREWITH.

[4886.] I am prompted to reply to the letter of "J. M., Pontypridd," which appears on page 345 of B.J. for August 28.

Your correspondent's "facts" are somewhat incomplete, or the *light* he requires might be brighter. He does not say which of Doolittle's methods were employed, though it is clear he did not use a cage, nor confine broodless bees on the "recommended" methods; and his percentage of loss ("one in seven cases") does not—upon reference to the book in question—afford a clue.

Nor does "J. M." afford any information as to the condition of the new queen before introduction. All this leads me to ask: 1. Had she travelled any distance? 2. How was she treated after receipt? 3. Was she from an adjacent colony? 4. What was its condition? And (5) How long was she confined?

These details would seem to affect the time before the new queen began to lay. For instance, I have introduced by direct introduction—or the "Simmins" method—queens which have been confined in postal cages, and several days have sometimes elapsed before they settled again to lay. This may not be unusual, the ovaries are to be stimulated afresh. Take the case of one young queen, in my own experience. She was a travelled "tested queen," of different race from my own or neighbouring bees, and was introduced at night to a strong colony. She "piped" for some time as though frightened or roughly treated, and an examination three days later failed to reveal any signs of her.

I made an examination on the fifth day, and failed to discover eggs or enlarged cells, and a frame of younger brood was therefore added. On again examining the hive next day I found some addition of eggs to this comb and also in the one adjacent.

Of course, one must take for granted that J. M.'s "facts" are correct, and that his queen was tested, *i.e.*, not a virgin; but when he asserts that the introduction was unsuccessful, I venture to suggest that failure to find a queen does not prove she is not in the hive!

I would also ask, does the present queen show signs of rough usage, and are the resulting bees of the "tested" variety? As J. M. does not give any details regarding the fate of the queen cells, the questions arise, were these destroyed; did either hatch? His suggestion is apparently in the latter direction, and that the queen was reared in less than normal time. But his own reasoning on the subject shows that he does not seriously hold this view. Suppose, however, that an "old" larva was chosen, the queen "period" would not be shortened, although the worker period might be less. In any case the abnormal queen would not be so well formed, nor so likely to meet the drone in record time!

One does not like to be dogmatic upon any subject, and in bee-keeping particularly all sorts of things seem possible.

Is it not possible, for instance, that the bees decided—about the same time as "J. M."—to supersede the old queen, and had started queen-cells for the purpose a week before the introduction, destroying them later?

Bees seem sometimes to continue building cells for a day or two under altered conditions. My suggestion is, however, that the queen was safely introduced, and did not lay for some days owing to some mis-stated cause. Moreover, if the present bees are *not* of the tested race, I would ask: Does "J. M." remember losing a virgin queen from an adjacent hive about the same time?

I fear I have occupied too much of your space, and asked many questions, but my justification lies in the fact that I am often surprised at the problems which the B.B.J. is asked to unravel upon the scantiest of data, and whilst there seems to be room for more "light" on this matter, your correspondent himself would appear to be the one most able to supply it!—L. S. CRAWSHAW, *Yorks, September* 2.

SOME "FACTS" ABOUT BEE-KEEPING.

[4887.] I am much obliged to Mr. Sladen and "J. S. D." for their assistance in elucidating my "facts" on page 353 of B.B.J. I assumed too readily that my failure to find the introduced queen, the absence of evidence of her presence, the rearing of queens subsequent to her introduction, and all this so late in the season, pointed unmistakably to queenlessness. One thing I omitted to state in my recital of "facts," viz., that I could not of my own knowledge say that the introduced queen was "tested," but she was sold to me as a tested queen. If this explanation had been made the mystery would have been rendered more easy of solution. The explanations given in the B.B.J., backed up by friendly expert opinion nearer home (unkindest cut of all, I was told I had been dreaming), go to prove that though bees do nothing invariably, they will not under any circumstances accomplish the impossible.

It may be remembered that a few months ago I reported severe losses from foul brood. The tale of my misfortunes was not complete, for further losses occurred until the number of my stocks was reduced from fifty, autumn count, to nine in mid-June. Since that date an improvement has set in, and, what with division and a few driven stocks, I have now nineteen hives tenanted, with the inmates in apparently perfect health. Of course, the honey yield has been insignificant—a mere 100 lb. or so—and, notwithstanding a reserve fund of about 300 lb., I am under the necessity of buying heavily.—J. M., *Pontypridd.*

POISONOUS HONEY.

[4888] After reading the very interesting paper by your contributor "D. M. M." in the JOURNAL of August 21, I think it requires some small comment from me, inasmuch as I think my paper (4679, in B.J. of Feb. 6) scarcely conveys the meaning originally intended, or that he has placed some slight misconstruction upon it.

I then endeavoured to express most clearly that a flower contains less of the active poisonous characteristic of a plant (as personally proved by chemical analysis) than does either leaf, stem, or root. I quite agree with our friend that the root during winter and early spring stores the juices for the building of stem and leaves, and according to season contains more or less alkaloidal poison, as is the foliage advanced or otherwise.

I am also strongly inclined to regard nectar purely as a secretion (possibly the result of dialysation), and which can be compared for our purpose with the secretions of the human body. For instance, the secretions of the nasal or oral organs rarely, if ever, contain any indications of poison, although such poison may be largely present in the blood. And, although these honey poisoning cases are not infrequently reported to have taken place abroad, yet they have not been authenticated by chemical or toxicological analysis, which, it is to be expected, would have been performed. The possibility of bacterial or metallic poisoning has not, so far as I know, been brought forward, although much may be attributed to either of these causes. I have frequently found copper in no small amount

in foreign honey, and I have no doubt but that other metals can be found, did we trouble to search, since honey, as all apiculturists know, is naturally preserved with formic acid, which must have some action, if only slight, on the inside of the metallic vessels in which it is frequently stored.

Again, honey can be regarded as a medium suited for the cultivation of bacilli (especially in a fermented state), and that it tolerates *Bacillus alvei* is but too well known to us all. But of poisonous bacilli in honey I have as yet had no experience, so that I only bring it forward as a feasible suggestion. In my business career, in which I think I have handled a few hundred tons of foreign honey, I have, on more than one occasion, suffered unpleasant effects after partaking of the same. But on the two or three occasions on which I investigated the matter I found the honey to contain either wax in undue proportion, or distinct traces of copper, and have attributed the results to either of these two causes.

Again, I am not inclined to agree that because the aroma of a plant is conveyed to honey, it necessarily follows that the latter possesses some of its poisonous properties without its being substantiated by chemical analysis.

It is easily possible that the overpowering odour of some plant may have brought about the symptoms referred to in the article on the "Drunken Bee," as an atmosphere impregnated with lilies or violets produces unpleasant symptoms frequently in human life; or, still more likely, the lime tree and others may emit a volatile perfume possessing alcoholic or aldehydic properties, which would produce the identical results recorded. But I hope to write an article on this particular subject, controlled by practical experiments, at an early date.

Finally, I would wish it to be understood that these remarks are not brought forward with a spirit of controversy with my friend Mr. "D. M. M.," but in the hope that they will, like his work on the same subject, bring some of our scientific workers to the rescue, and that we shall arrive at some satisfactory conclusions on this all-important subject.

I tender my apologies for the delay in this paper which has been caused by my absence from home for a short while.—HERBERT SHORTHOUSE, M.P.S., F.C.S., *September* 6.

EXTRACTING SECTIONS.

[4889.] "G. M. S." (page 354) recommends an extracting cage for sections, described in Vol. II. of Cheshire's book. No doubt that is all right, but to-day (September 5) we have extracted 300 unfinished sections, and only damaged fourteen of the whole lot, and these were broken when we made our first start, the result of too much speed. The work was done with an ordinary Meadows' "Guinea" geared extractor. We were surprised to find it so convenient for section-extracting.—DEVEREUX, *Shillington, September* 5.

Queries and Replies.

[2960.] *Cleaning-up Wet Combs.*—I had a bad time with my bees to-day (August 30) when putting back into the hive for cleaning-up a box of shallow-frames from which I had just extracted the contents, having taken them from the hive about four days previously. I had given same stock the first lot of frames extracted the day before, for the bees to clean out the combs, and on removing this box to-day and putting on the other one I got such a reception as I shall not soon forget. The bees rushed at me in hundreds. Fortunately I had a veil on, or I should have got it more severely even than I did; as it was, I was pretty badly stung. Nor did I use a smoker, as is my usual custom. The day would not be considered a bad one for the purpose, and the time was mid-day. Do you consider it was the fact of my not using the smoker that caused the attack, or had I been disturbing the bees too often? I have three hives containing shallow-frames and three others worked for sections, and so far have managed to take the honey away without much trouble. I do not mind a few stings, but do not like the bees to "make for me" like they did to-day. If you would recommend me how to manage better I should be much obliged.—G. W. J., *St. Martin, Cornwall.*

REPLY.—On such occasions as are mentioned above, and at this season of the year, a puff or two of smoke should always be given before removing combs. We should also suppose that the bees would not be honey-gathering on the day mentioned, and the feast they got in cleaning up the combs would incline them to be "touchy" in temper, as bees often are in autumn. Finally, it should be borne in mind that boxes of wet combs should always be given to bees after sundown, or an hour or two after bees have ceased working for the day.

[2961.] *Removing Skeps after Transferring Bees.*—I must thank you for your reply to my previous query (2955, page 347). There are ten brood-frames fully drawn out underneath each skep; the brood in skeps is hatching out now. Will you please tell me what to do, whether to transfer as soon as all are hatched, or wait till April?—PERPLEXED, *Ashby-de-la Zouch.*

REPLY.—As soon as brood in skeps has hatched out the bees may be driven and allowed to run into the lower hive; then feed up rapidly for wintering.

[2962.] *Coverings for Skep Hives.*—I have several skep hives which I am anxious to cover up for protection during the winter. We have heard much of the coverings of frames being made secure and water-tight, but can you or any of your numerous readers tell me of a good cover for skeps, one that will look neat, be rainproof, and impart the necessary warmth to the interior? The straw-hackle becomes untidy, and offers an abode for mice and other vermin.—A. E., *Ashby-de-la-Zouch, September* 6.

REPLY.—For neatness and "good looks" nothing beats a well-made straw hackle; but for efficiency and durability use an American cheese-box, with its bottom knocked out, and surmount this with an earthenware milk-pan as roof.

[2963.] *Transferring Bees.*—Following your advice I, on April 19 last, placed two skeps of bees over top bars of frame-hives. These bees were driven and fed-up lots of September, 1901, so that the combs were all comparatively new. On August 1 I removed the skeps, the result being 18 lb. net in No. 1 skep, and 22 lb. in No. 2. They had in addition ten and eleven frames respectively in their new quarters full of brood and honey, which I purpose leaving alone. 1. Do you agree? Anyway, I am quite satisfied with the result, and beg to thank you for helping me with your prompt advice. I should like to ask two more questions if I am not too troublesome. 2. Is a fifteen-frame hive likely to prevent the swarming fever? 3. When is the best time of year to renew the *brood* frames, and how many at a time?—R. J. T., *Romford, September* 4.

REPLY.—1. Your proposed plan is quite right. 2. It will assist in the direction named, but is not a sure preventive. 3. In spring, as brood needs spreading, say, early in April, or as soon as weather is warm and settled.

[2964.] *Feeding up Driven Bees.*—I shall be much obliged if you would reply in your next issue if the following method of dealing with driven bees is correct. I am having this week the bees from four strong skeps. After "driving," I purpose uniting the whole of these in a frame-hive, on eight bars furnished with full sheets of "Weed" foundation, and feeding liberally with syrup (say half-pint a day), with candy cake medicated with pea-flour given above top-bars of frames. If I am doing right in this, kindly say how long the feeding of syrup should continue. Any hint would be esteemed.—W. T., *Maidstone, September* 6.

REPLY.—Quite right, but there will be no need to give flour candy if you give, say, 25 lb. of syrup rapidly. The bees must, however, be kept as warm as possible during the time they are comb-building.

[2965.] *Dark Honey for Winter Bee-Food.*—The season here has been very poor. Very little honey stored till about three weeks ago, when the bees worked hard and gathered a quantity of dark-coloured stuff which I take to be honey-dew. From an extract in BEE JOURNAL of August 28 I am in some doubt as to its being suitable winter food for the bees; however, it is of little other use, and I meant to give it to them instead of feeding with syrup. One of my stocks stored more than 25 lb. of it in one week, so there is plenty of it. From one hive holding twelve frames, that did not swarm, I got some nice honey earlier in the season. 1. Kindly say in next week's JOURNAL if I may give them the "black" honey. 2. I suppose if I uncap it and place it above brood nest they will carry it down all right.—A READER, *Doune, N.B., September* 3.

REPLY.—1. We never hesitate in leaving dark honey for the bees' use in winter, whether it be called honey-dew or "black honey," or otherwise. 2. If the sealed comb is uncapped the honey will most likely be carried below, but it does not always so happen.

Echoes from the Hives.

Chichester, September 5.—As a brief echo from the South Coast for 1902, I may say bees and bee-keepers have done badly this season, the surplus of honey being not more than a quarter of the ordinary crop. It makes one almost inclined to write surplus nil, for where one stock has put a little in the supers, perhaps its neighbouring colony will require it before next spring, seeing that a good many stocks are very light and will require feeding. For honey gathering I cannot remember so unpropitious a season; 1888 was bad, but not so bad as 1902. Altogether here in the South we must say crop far below the average. I would also add a line to say, do not forget to feed your light-weight stocks, or maybe 1903 will find you minus bees to do anything at all for you.—J. D.

BRIEF REPORT.

GLENISLA, N.B.

The yield of honey this season, so far as it has gone, has probably been the poorest since modern bee-keeping came into vogue. Clover was not abundant, and in addition to this, the weather prevented the bees from leaving the hive for almost half the available time. Nor does the heather hold out very brilliant prospects. It is only just now coming into bloom, and owing to the long continuance of wet weather and want of sun it will probably fade soon. The yield of heather honey, even from the best apiaries, cannot be large. Prices are likely to range high, but this will not nearly compensate for the reduced yield.

Bee Shows to Come.

September 6 to 13, at the Agricultural Hall, London.—Honey Show in connection with the Confectioners', Bakers', and Allied Traders' (10th) Annual Exhibition and Market.

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the seventh Annual Exhibition and Market of the Grocery and Kindred Trades.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute, Blackett-street. Fifteen classes for Bees, Honey, and Bee-appliances. (Open to Northumberland and Durham only.) Schedules from James Waddell, hon. secretary, Wooler, Northumberland. **Entries finally close 10 a.m., October 4.**

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c.

PRESS CUTTING.

FIREMEN AND HIVING BEES.

(From our own Correspondent.)

Berlin, Thursday, July 17.

Yesterday it took the Berlin fire brigade two hours to hive a swarm of bees, which had settled on one of the masts of the electric tramway line.

Armed with their smoke helmets and fireproof gloves, the men succeeded at last in securing them in a sack. An enormous throng of people witnessed the exciting scene.—*Daily Mail.*

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

C. S. Bradley (Kettering).—*Insect Nomenclature.*—The insect sent is a specimen (female) of the *Giant Sirex.* The female is furnished with a long ovipositor, by means of which it bores a hole through the bark of the tree stem for the deposit of her eggs. The resultant larva is what does the mischief to the tree in which it is reared, and causes the "Sirex" to be classed among insects injurious to plant life.

J. B. Peacock (Darlington).—*Varieties of Heather.*—Both sprigs of heath sent are the *Erica vulgaris,* or common ling. It is one of the two best honey-yielding heathers. The bad season you complain of is common nearly everywhere this year.

A Beginner (Tamworth).—*Early Granulation of Honey.*—The granulation of honey depends so much on season, apart from the source of supply, that no time can be fixed for it becoming "white and solid," as all pure honey granulates. It is no detriment.

R. D. (Terling).—*Soluble Phenyl for Medicating Bee Food.*—By following the directions on page 167 of "Guide Book" (when using No. 7 recipe) you will be able to medicate with soluble phenyl as desired. Do not forget the "note" below recipe referred to, viz., to pour the water *on the phenyl* in order to form an emulsion when shaken.

J. H. B. (Cheshire).—*Effect of Bee Stings.*—It is, no doubt, largely owing to the condition of the blood at the time that so marked and unusual an effect as you describe follows a single bee-sting. We have heard of such before, but only on very rare occasions, and usually with persons of full habit. We cannot say if you will be immune from further mischief of the same kind, though we hope you may, as those we know of have been.

Inquirer (York).—*Dartford, Kent, as a Bee District.*—We have known very good harvests of honey secured in the district named, as fruit orchards are plentiful all over the county.

Constant Reader (Northampton).—*Late Granulation of Honey.*—It is not uncommon for honey kept in a warm cupboard to remain liquid for over a year. To keep since last year in that condition shows its ripe condition when stored away, and testifies to its good quality rather than the contrary. As it has now begun to granulate it should do well for exhibition next if the "grain" is all right.

A. Metcalf (Milnthorp).—*Feeding Transferred Bees.*—You do not say if any of the "combs" (as well as bees) have been transferred from the skep to frame-hive. This is important, because if the bees have to build out from foundation all combs they have to winter on, the hive must be made as warm as possible and good thick syrup given rapidly and plentifully till five or six frames of comb are drawn out. We cannot undertake post replies, but you might let us know if the bees take the food well and are getting on with comb-building.

Josiah Gatley (Manitoba, Canada).—*Exhibiting Canadian Honey at Shows.*—We fear you would have difficulty in getting Canadian honey staged in competition at shows in this country—under the present arrangements with regard to prize schedules, it being generally laid down therein that the honey staged must be "gathered in the

United Kingdom." Besides, all shows for the year 1902 will be over by the time you name.

L. H. (Lyndhurst).—*Buying Queens from Abroad.*—You had better ask for instructions with regard to safe introduction from the queen-breeder who supplies the queens. By so doing we could not be blamed for any mishap that might occur; besides, the breeder usually gives the needed directions.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

C. B. (Galston).—Comb contains nothing worse than "chilled" brood.

H. R. (Holbeach).—Your sample has failed to reach us. It may have been undelivered by post through being badly packed. We also notice you address letter, dated 3rd inst., "Editor, L B.K.A.," which is entirely wrong.

J. M. (Kidderminster).—There is foul brood in comb.

J. H. H. (Keyingham, Hull).—Your sample contains no brood at all, and is therefore unsuitable for examination with regard to foul brood. If you have, as stated, combs in the hive "with capped brood in them," why not send an inch or so on to help us in forming an opinion?

Honey Sample.

R. E. (Llanbedr).—The sample is coarsely granulated and shows signs of fermentation. It is also of poor flavourless quality, but it would need chemical analysis to test its purity. You must be careful in declaring it to be adulterated, merely because of being dubious as to its purity, or you might get into trouble.

Special Prepaid Advertisements.

Twelve words and under, Sixpence; for every additional Three words or under, One Penny.

DRIVEN BEES with QUEEN, 4s.; cash with order; box returnable. PETERS, Banstead. O 87

HEALTHY DRIVEN BEES, 3s. 6d. lot; travelling boxes free. MORRIS, Stationmaster, Stanford-le-Hope, Essex. O 99

NEW HONEY (extracted), 28-lb. tins at 6d. per lb.; sample 2d. OWEN BROWNING, Ashley, King's Somborne, Hants. P 1

DRIVEN BEES with Queen, 3s. lot; package returnable. M. GREAVES, Boys' Home, South Bersted, Bognor. O 96

FOR SALE, three pure-bred BUFF LEGHORN COCKERELS, 3s. each; approval. WARREN Junr., Great Horwood, Winslow, Bucks. O 95

Prepaid Advertisements (*Continued*).

WANTED, 1,000 lbs. EXTRACTED HONEY. Price to JOHN MORGAN, Upper Boat, Pontypridd. O 91

WAX EXTRACTOR by Taylor, only used 4 or 5 times; cost 10s. 6d., sell for 6s. or exchange honey ripener. DEVEREUX, Shillington, Hitchin, Herts. O 84

JUST right for the Heather.—SHALLOW FRAMES of COMB, 1½-in. thick, 5d. each. JOHN WALTON, Honey Cott, Weston, Leamington. P 2

WANTED, WELL-FILLED SECTIONS, quote lowest, carriage paid. SUMMERS, Broadgate, Beeston, Notts. O 86

WANTED, 2½ cwt. EXTRACTED HONEY. State lowest price. KABERRY, Pharmacist, Southport. O 93

EXTRACTOR (Little Wonder) FOR SALE, excellent condition, 4s., or Exchange Feeders, &c. MOORE, Coldharbour, Sherborne. O 94

FOR SALE, eight strong healthy STOCKS, Bar-Frame Hives, Extractor and Appliances. MARSH, East Wick, Marlborough. O 85

WANTED, SKEP HONEY-COMB; also RUN, 30s. cwt. Bees, wholesale price. For Sale, Variety Queen, 5s.; Nuclei, 7s. 6d. DAWKINS, Sutton Coldfield. O 92

WHAT OFFERS, 100 good SECTIONS, 2 cwt. light HONEY, 28-lb. tins; 144 lbs. in 1-lb. screw-cap jars; 10 lb. Beeswax? HEDGES, Bishops Waltham. O 89

MESSRS. STONE & SON, Chemists, Exeter, are buyers of ENGLISH BEESWAX in large or small quantities. Write stating quantity and price required. P 5

SPLENDID LIGHT ENGLISH HONEY, 6½d. lb.: second quality, 5d. Sample, 2d. E. E. HARDY, Queen Ann's Cottage, Great Yeldham, Halstead, Essex. O 98

HALF-PLATE PHOTOGRAPHIC SET and quantity Accessories, price £5 5s., cost nearly double, take part cash and Bees to £6 10s. DOUBTFIRE, Wealdstone. P 4

FOR SALE, 11 BAR-FRAME HIVES BEES, with Supers and Section Crates, splendid condition; also few empty Hives; quantity Honey.—BARNES, Station-road, Wigton, Cumberland. O 97

TEN 14-ft. CARPENTER'S BENCHES, 12s. 6d. each; General Joiner, £40; Mitre Cutter, cramps, 25s.; ½-ton Wire Nails from 7s. 6d cwt.; 10-in. Foundation Mill and Tank, 20s.; Feeders, 3d. to 3s. (20 lb.); Section Crates, 8s. doz.; carriage paid. Exchanges entertained. JOHN EDEY, Surveyor, St. Neots. O 88

GUARANTEED HEALTHY DRIVEN BEES, 1s. 3d. lb. with Queen: Queens, 2s.; strong Stocks, straw Skeps, 12s. 6d., 1902 Queens. Wanted, Sections or Extracted, good, in Exchange for Stocks, ten Standard Frames, or sell 30s., with Hives. WOODS, Normandy, Guildford. P 3

RUDGE-WHITWORTH BICYCLE, free wheel and rim brakes; ditto, fixed wheel, quite new; "Dispatch," with free wheel and rim brake. Will ride either machine to any address within 40 miles of London. F. CARTER, Home Cottage, High-road, Burnt Oak, Edgware, Middlesex. O 90

DRIVEN BEES, 2s. 9d. lot., or 1s. lb. Box returned. J. BARNES, Burwell, Cambs. O 74

ABOUT SIX CWT. good light HONEY in tins or bottles. Offers. GARNER, Dyke, Bourne. O 42

WANTED, NEW SECTIONS (first quality). State lowest for cash. CHILTON, Polegate, Sussex.

HONEY, EXTRACTED (English), 50s. per cwt. on rail Manea. Tins returnable. F. PEPPER, Manea, March. O 77

HEALTHY DRIVEN BEES, 1s. 3d. per lb., not less than 4 lb. (Boxes to be returned.) E. LONG, Fulbourn, Cambs. O 34

Editorial, Notices, &c.

THE "CONFECTIONERIES" EXHIBITION.

THE CONFECTIONERS' SHOW.

Resuming our hurried notice of last week on the above exhibition, there is not much to add with regard to the display as a whole, except to express our regret that an adverse bee-season unfortunately upset all chance of a successful entry for the new Selling-Classes instituted this year for the first time.

Instead of a goodly array of honey for sale by sample at prices likely to invite attention from would-be buyers, there was not a single sample of section-honey on offer, and the extracted honey in jars, to say the least, made a poor and uninteresting display from several points of view.

Bee-keepers cannot, of course, command a good season, and had the chance offered we have no doubt it would have been taken advantage of; but for the present our hope is that better luck will come should the opportunity again occur of making an effort to establish a honey market on practical business lines.

Regarding the other classes, a word of special mention must be given to the Trophy Class, in which some excellent exhibits were staged. We are also bound to say the printed requirements of the schedule were evidently carefully noted by most of the exhibitors.

The prizes went in the order of merit to "displays of honey and honey products shown in suitably attractive form for a tradesman's window" in the fullest sense, and this is the best praise that can be given.

The classes for extracted honey graded by colour are, we think, now settling down into their true position so far as showing their relative importance on the show-bench with thirty-five entries of "light," twenty of "medium," and seven of "dark" honey staged.

The wax-classes also are getting into line with the requirements of the schedule, the "quality" class producing eighteen entries against eight in that for the "retail counter trade," being very much to the purpose.

We need say no more on the show as a whole beyond adding a line to inform intending exhibitors at the Dairy Show next month that exhibits staged at the "Confectioneries," and also at the "Groceries" (which latter opens on Saturday next), can leave their "Dairy" exhibits at the Hall till the required time for showing. This important concession will, no doubt, be fully appreciated, seeing how much trouble and expense will be saved thereby.

WARWICKSHIRE B.K.A.

ANNUAL SHOW.

The Warwickshire Bee keepers' Association, which now numbers nearly 500 members, held its annual show at Warwick, on August 27 and 28, in conjunction with that of the Warwickshire Agricultural Society. The entries in the bee department nearly doubled those at Solihull last year, and the exhibition was a genuine success. Lady Leigh sent a selection of comb and extracted honey, and this exhibit was awarded the Society's certificate of merit. Mr. G. Franklin, expert of the Warwickshire Association, gave a number of demonstrations during the afternoon. Dr. Hamlyn Harris, Vice-President of the Bristol Bee-keepers' Association, who judged the exhibits, made a few observations on the merits of the exhibition, which he said was a decided success. He suggested that classes should be introduced into the schedule for honey vinegar and other fluids. His experience on the Continent, he added, had shown him that their Continental neighbours were far ahead of them as regarded the uses of honey.

The prizes were then distributed, and at the conclusion the company heartily accorded a vote of thanks to Lord Leigh and the Hon. Cordelia Leigh for their presence that afternoon.

Mr. Barr then presented the Hon. Cordelia Leigh with the certificate of merit awarded to Lady Leigh for her non-competitive exhibition. Lord Leigh, in reply, humorously remarked that he would request Lady Leigh to allow him to place the certificate in the strong-room at Stoneleigh Abbey in order that it might be handed down to succeeding generations.

AWARDS.

Observatory Hive with Bees (Foreign) and Queen.—1st, E. H. Taylor, Welwyn, Herts.

Observatory Hive with Bees (English) and Queen.—1st, E. H. Taylor; 2nd, W. A. Rollins, Stourbridge.

Bar-frame Hive for General Use.—1st, E. H. Taylor; 2nd, G. Franklin, Burton Green, Kenilworth; c., Joseph Hunt, Hampton-in-Arden.

Frame-hive for Cottagers' Use.—1st, E. H. Taylor; c., Jos. Hurst.

Super Honey from One Apiary.—1st, John Walton, Weston, Leamington; 2nd, W. R. Charles, Wellesbourne; 3rd and h.c., G. Franklin; v.h.c., H. Cleaver, Leamington.

Shallow-frames for Extracting. — 1st, H. Cleaver; 2nd, J. Walton.

Twenty-four 1-lb. Sections. — 1st, A. Hutchinson, King's Norton; 2nd and h.c., H. Cleaver; 3rd, J. Walton; h.c., H. G. Eveson, Wootton Waiven, and H. Parker.

Twelve 1-lb. Sections. — 1st, A. Hutchinson; 2nd and h.c., H. Cleaver; 3rd, J. Walton; h.c., H. G. Eveson and Miss E. K. Coventry.

Twelve 1-lb. Jars Extracted Honey.—1st, W. R. Charles; 2nd, H. Cleaver; 3rd, A. W.

Rollins ; h.c., W. J. Hyde and J. Walton ; c., A. C. Platt, Warwick.

Extracted Honey (not over 50 lb.).—1st, A. D. Allen, Banbury ; 2nd, W. R. Charles ; 3rd, G. Franklin ; h.c., J. Walton, J. Burrows, and W. J. Hyde.

Super Honey from One Hive (cottagers only).—1st, J. Arthurs, Studley ; 2nd, J. Seeney, Stratford-on-Avon ; 3rd, J. Hurst ; 4th, W. H. Allard.

Twenty-four 1-lb. Sections.—1st, W. H. Allard : 2nd, R. Cleaver ; 3rd, C. J. Graves, Knowle ; 4th, J. Lees, Wootton Waven ; 5th, J. Corbett, Knowle ; 6th, D. Creswell, Dunnington.

Twelve 1-lb. Sections.—1st, W. H. Allard ; 2nd, J. Arthurs ; 3rd, R. Meade, Dunchurch ; equal 4th, J. Rodenhurst, J. Seeney, and J. Corbett ; v.h.c., W. J. Alliband ; h.c., R. Cleaver.

Single 1-lb. Jar Extracted Honey.—1st, R. Cleaver ; 2nd, W. H. Allard ; 3rd, W. J. Alliband ; equal 4th, J. Arthurs, E. Iliff, and S. Ford ; h.c., R. Meade and M. Galloway.

Coronation Trophy.—1st, H. Cleaver ; 2nd and v.h.c., J. Walton ; 3rd, A. W. Rollins ; c., J. Burrows.

Collection of Appliances.—1st, G. Franklin ; 2nd, L. Wilday, Minworth ; 3rd, W. H. Allard ; h.c., H. Cleaver and A. W. Rollins ; c., E. H. Taylor.

Bee-driving Competition.—1st, J. Perry, Banbury ; 2nd, J. Arthurs ; 3rd, J. Seeney. —(*Communicated.*)

BERKS BEE-KEEPERS' ASSOCIATION.

SHOW AT READING.

On Wednesday, August 27, the Berks B.K.A. held a show of honey at the Forbury Gardens, Reading, in conjunction with the Summer Show of the Reading Horticultural Society. The honey display was under the management of Mr. D. W. Bishop-Ackerman, Hon. Sec. of the Berks B.K.A. ; and Mr. T. A. Flood, of Reading, gave demonstrations in the bee-tent at intervals. The entries numbered forty-five, and the Rev. W. E. Burkitt officiated as judge, making the following awards :—

Twelve 1-lb. Sections.—1st, S. A. Canning, Wickham Heath ; 2nd, C. W. Dyer, Compton ; 3rd, H. W. Seymour, Henley-on-Thames.

Twelve 1-lb. Jars Extracted Honey.—1st, H. W. Seymour ; 2nd, W. W. Davies, Wallingford ; 3rd, W. Janes, Marlow.

Six 1-lb. Sections (novices).—1st, W. Canning, Boxford ; 2nd, W. Janes ; 3rd, A. Wise, Calcot.

Six 1-lb. Jars Extracted Honey (novices).—1st, — Barlow, Downley ; 2nd, C. Austin, Twyford ; 3rd, A. Wise.

Trophy of Honey and Wax.—1st. H. W. Seymour ; 2nd, A. D. Woodley, Caversham ; 3rd, C. W. Dyer.—(*Communicated.*)

CHESHIRE B.K.A.

HONEY SHOW AT BEBINGTON.

A show of hives, honey, and wax was held in connection with the Wirral and Birkenhead Agricultural Society at Bebington, on September 10 and 11. Considering the unsatisfactory nature of the season, the number of entries (122) was very satisfactory. The Rev. T. J. Evans, Tarvin Vicarage, and Mr. R. Cock, Stafford, officiated as judges, and made the following awards :—

OPEN CLASSES.

Complete Frame Hive.—1st, Geo. Rose, Liverpool ; 2nd, W. Cartwright, Moore, Warrington.

Twelve 1-lb. Sections.—1st, W. Woodley Beedon, Newbury ; 2nd, A. W. Weatherhogg, Willoughton ; 3rd, J. Pearman, Derby.

Twelve 1-lb. Jars Extracted Honey.—1st, T. S. Holdsworth, Kirton Lindsey ; 2nd, J. Pearman ; 3rd, W. Woodley.

MEMBERS' CLASSES.

Six 1-lb. Sections.—1st, Rev. E. Charley, Ince Vicarage ; 2nd, W. Ratcliffe, Barthomley ; 3rd, Mrs. Arnold, Barrow Rectory.

Twelve 1-lb. Jars Extracted Honey.—1st, A. Thomas, Frodsham ; 2nd, P. H. Rawson, Market Drayton ; 3rd, S. Eaton, Audlem.

Six 1-lb. Jars Granulated Honey.—1st, P. H. Rawson ; 2nd, R. Gray, Bromborough ; 3rd, H. Edwards, Rossett.

Six 1-lb. Jars Extracted Honey (other than light-coloured).—1st, E. P. Hinde, Heswall ; 2nd, S. Eaton ; 3rd, J. Cunnah, Wrexham.

Two Shallow Frames of Comb Honey—1st, R. Gray ; 2nd, J. Dean, Upton ; 3rd, T. Henshaw, Thrapwood.

Beeswax.—1st, W. Ratcliffe ; 2nd, G. Lambert, Comberbach ; 3rd, E. Maxwell, Tallaw Green.

DISTRICT CLASS.

1st, W. Lowe, Rainhill ; 2nd, E. Griffiths, Rainhill ; 3rd, Rev. E. Charley.—(*Communicated.*)

NOTTS BEE-KEEPERS' ASSOCIATION.

ANNUAL SHOW AT MOORGREEN.

The annual show of above association was held at Moorgreen on September 9, and as far as weather (the first consideration) is concerned was all that could be wished for. The exhibits staged were rather more numerous than usual, and the honey of excellent quality generally. Mr. W. B. Webster, Binfield, Berks, officiated as judge, assisted by Mr. G. E. Skelhorne, of Notts., and made the following awards :—

Collection of Hives and Appliances (no entry).

Complete Frame-hive for General Use (no entry).

Display of Honey in any Form, not to exceed 80 lb. of Honey (5 entries).—1st, G. Marshall, Norwell ; 2nd, G. Hayes, Beeston ; 3rd, J. Gray, Long Eaton.

Six 1-*lb. Jars Extracted Honey* (*light*) (14 entries).—1st, A. G. Pugh, Beeston; 2nd, J. Breward, Staythorpe; 3rd, W. Brooks, Eastwood.

Six 1-*lb. Jars Extracted Honey* (*dark*) (9 entries).—1st, A. G. Pugh; 2nd, G. M. Bolton, Eastwood; 3rd, W. Brooks.

Six 1-*lb. Sections* (6 entries).—1st, G. Marshall; 2nd, D. Marshall, Cropwell Butter.

Six 1-*lb. Jars Granulated Honey* (8 entries)—1st, H. Merryweath, Southwell; 2nd, A. E. Trimmings, Gedling; 3rd, G. Marshall

Shallow-Frame of Comb Honey for Extracting (7 entries).—1st, G. Marshall; 2nd, G. H. Pepper, Farnsfield.

Six 1-*lb. Jars Extracted Honey* (novices only—7 entries).—1st, H. Mackender, Newark; 2nd, L. Walker, Ruddington; 3rd, C. Markham, Retford.

Six 1-*lb. Jars Extracted Honey* (local class—5 entries).—1st, W. Brooks; 2nd, G. Smithurst, Watnall; 3rd, G. M. Bolton.

Honey-Vinegar.—1st, J. Gray; 2nd, G. Hayes.

Observatory Hive with Bees and Queen (9 entries).—1st, R. Mackender, Newark; 2nd, H. Mackender, Newark; 3rd, G. Marshall; 4th, Geo. Smith, Bradmore.

Beeswax in 2-oz. Cakes (8 entries).—1st, A. H. Hill, Balderton; 2nd, R. Mackender.

During the day, Mr. P. Scattergood held an examination of candidates for the third-class certificate of the B.B.K.A., three candidates presenting themselves. — (*Communicated.*)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

****** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

COMMENTS ON CURRENT TOPICS.

[4890.] *Honey Glands.*—These are organs found in many flowers, and their office is to secrete the sweet saccharine juice and generate it in the nectareous sacs, where it is stored up until it is rifled by the bees on their foraging excursions. They differ in number in various kinds of flowers, from one to five or more, generally according to the arrangement of the flower petals. Thus, in the Ranunculus family, with their five flower-leaves, there are five nectaries, corresponding with the five petals. In irregular flowers, however, the case is different, and frequently but one exists. It is placed in different positions on different flowers, but always situated just where the bee can most easily approach and sip from it. If these glands differ in number and position, their shape and size are even more diverse. The raspberry flower has a regular circular honey trough, and the bee sips all round it, taking some time to exhaust the supply. That bountiful bee flower, the lime, has a boat-shaped structure which in certain seasons is ever full to overflowing, and perhaps on no other plant does the insect load up so quickly and with so little trouble or exertion. Hellebores and many others have little tubular honey-pots yielding their stores willingly. The buttercups have five small circular glands, one on each petal. Though the flower is generally the seat of these receptacles for the nectareous secretion, other parts may be found at times to yield a flow, as in the case of beans and vetches, which secrete it by their stipules.

Honey Guides.—No less wonderful than the convenience of the honey glands which so much aid the bee in garnering the sweets of the flowers are these "guides," which direct it where to find the receptacles. The flower, indeed, seems to hold out a signal to the bee directing it where it should alight. Especially are these marks prominent on flowers of irregular formation, for they are invariably possessed of bright spots or streaks found only just over the part where the honey glands are situated. So the bees, making direct for these, lose no time in searching for the spot where the coveted sweets are deposited. I am inclined to favour the theory of those scientists who believe that the visits paid by bees to these flowers have generated both honey "glands" and honey "guides."

It may be worth mentioning that the name of "honey guide" is also given to a species of small bird found in many parts of Africa. This bird seems to take a delight in directing men to the spot where bees' nests and honey are to be found. They flutter and fly a little in advance, until at last they alight close to the spot where the honey is to be found. It is generally believed that they act in this way from no idea of benefiting mankind, but in order that, when the bees' domicile is rifled, they may gorge themselves at their leisure from the remains of the honey and the young larvæ left behind.

A Bee Fable.—The Talmud records that the Queen of Sheba, hearing of the wisdom of Solomon, resolved to put it to the severest test she could possibly devise. She presented herself with a bouquet of flowers in each hand, one culled from Nature and the other

formed by the art of man, and asked the wise King which was the false and which was the true. At first he seemed sorely perplexed, but observing a number of bees hunting for nectar he ordered the flowers to be placed within their reach, when they at once chose the real flowers, showing king, queen, and courtiers which were Nature's. An interesting poem has been written on the incident, the closing line of which records that "Even Israel's King learned wisdom from the *bees*."

A Science Corner.—There is no doubt that if this were got up on proper lines and conducted by some one of experience and knowledge such a page could be made very interesting and instructive. The study of the bee is incomplete without a study of the flowers whose essence they suck and on whose bountiful favours they live. The more we seek to know of these plants the more are we bound to be impressed with the wonderful goodness and bounty of the kind Providence who has bestowed these lovely gems to gladden our eyes with their beauty and cheer our lives with their exquisite colour and fragrance. They brighten every walk we take from early spring till late autumn, and the admirable system of succession, with its infinite variety of form and shade, prevents any tameness or sameness from palling the senses, for one species follows another in "gay but quick succession," so that every day there is something new.

Then as to the fauna, what numbers of the Hymenoptera we encounter everywhere! Our gardens are teeming with them all summer long, and every field contains its myriads; and for those who have the eye to see and the brain to comprehend, their shape, size, general appearance, homes, habits, and modes of life are all matters of interest, while the study and classification add new zest to every country walk or ramble. Mr. Sladen has proved a master in this department, and has shown a readiness and ability in answering all questions on insect nomenclature worthy of all praise. We want a reliable botanist who would in the same way aid the keen student of flowers and plants visited by the bee. I am confident our Editors will find room for any such contributions, and that "W. H." (who wrote on page 333) has only to make a beginning; for is not our JOURNAL "*devoted to the interests of bee-keepers*"?—D. M. M., *Banff*.

REAL "FACTS" ABOUT BEE-KEEPING.

[4891.] Your correspondent, "J. M., Pontypridd" (page 366), is much obliged for some suggestions as to the failure of introducing a queen to a hive, and having found another queen hatched out and laying in a few days after. Now, Messrs. Editors, did it strike neither you nor Mr. Sladen that bees themselves re-queen about August, and while your correspondent's bees were already re-queening, was it likely they would have his alien queen? I first saw the explanation to your correspondent's mystery about twelve years ago, when the superseded queen was leaving her happy home in favour of her newly-matured daughter. When "J. M." took out the old queen, the young queen was ready to hatch out in a short time, and the introduced queen, of course, was simply not wanted.

Referring to Mr. Woodley's "Note" on section extracting (page 365), if he will drive his extractor slowly for a little while, and then finish extracting his sections after turning the cages the other way round, he will only break about one section in fifty.

I am a busy man, but the above problems were so easy of solution that I thought I would trouble you with my help in solving them.—ERNEST E. DAVIS, *Great Bookham, Surrey, September* 13.

(*Correspondence continued on page* 376.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The illustration on opposite page carries us once more to Ireland, where Mr. Doyle may be counted as a typical bee-man of the best sort. A farmer by occupation, he shows how bee-keeping may be included as a branch of farm work with pleasure and profit, as shown in the following "Notes" written at our request:—

"During the month of June, 1887, one day will always be fixed in my memory as recording my start in bee-keeping, for on that day I found a stray swarm on our land, and, of course, I hived the wandering bees in a skep. We were at the time subscribers to an agricultural paper that had its weekly bee column, which I at once began to take an interest in as dealing with modern bee-keeping. The result of my reading was that before the following June I had bought a good frame-hive to work from, and secured all the bee books I could lay hands on were bought, and their contents eagerly devoured. I also managed by the autumn of 1888 to drive some skeps of bees, and in this way increased my small apiary to five stocks.

"Being handy with carpenters' tools, I made all the hives seen from the first or pattern one. The frames are bought ready-made, being so cheap as not to be worth the trouble of making. Nearly every year since that time I have largely increased the number of my stocks from swarms and driven bees, and I find stocks built up from the latter always the following year.

"In my home apiary at the present I have sixty stocks, all in frame-hives, and last spring I started an out-apiary in which there are now twenty stocks—fifteen in frame-hives and five in skeps—and they are all strong in bees

and stores, most of them being headed by young queens.

"I work entirely for section-honey, and regard extracting as a messy job. In my earlier days I used to put excluder zinc between frames and sections, but for the last few years I have discarded excluders and have very few sections spoiled thereby. A few years ago I made four 'Wells' hives, and they worked fairly well as regards the supplies, but I think any two single-queened hives would gather as much surplus as one 'Wells,' which latter I always regarded as two hives. In my case I found that, whenever one end of a 'Wells' swarmed, the other lot followed suit; thus by the end of the year I usually had one end queenless. Not only so, but when I have now an empty hive it is generally a 'Wells.'

"I also tried Simmins's non-swarming system when my stocks had increased to forty or fifty. I read Mr. Simmins's pamphlet carefully, and gave the plan a fair trial, both with frames fitted with starters only under the brood-nest and in long hives with frames and starters placed in front of the brood-nest, but when the warm weather came the bees swarmed as much as any hive I had. I regard swarming as one of the greatest troubles a bee-keeper has. To give an example. In 1898 my forty-nine hives (spring count) swarmed eighty-four times. I increased to sixty-nine stocks, and they gave me an average of fifty sections per hive.

"The season of 1901 was a very good one with me. My fifty-five hives (spring count) swarmed forty-eight times. I increased them to seventy colonies, and these averaged seventy sections per hive. It seems to me impossible to stop bees from swarming when honey is coming in fast. But taking all in all, I do not think natural swarming is any disadvantage if the hives are rightly manipulated afterwards. I do not allow the swarms to be long idle, for they are often busy building out foundation one hour after the swarm comes off. It is a pleasure to me to say foul brood has never appeared in my apiary, though the disease is less than three miles away.

"I have made it a rule for the last seven or eight years to transfer all stocks annually to clean body-boxes, and after scraping floor-boards I put naphthaline in the back of hives renewing it as needed. I also remove dark or irregular combs, and replace them with full sheets of foundation.

MR. JOHN DOYLE'S APIARY, KELLYSTOWN, ADAMSTOWN, CO. WEXFORD.

"The hives in the home apiary stand about 6 ft. apart, round the four squares of a half-acre garden. They are shaded on three sides by trees. On the fourth is a privet hedge, to which nearly all the swarms go until the virgin queens begin to come out, when the swarms usually cluster on the tops of the highest trees and in all sorts of awkward places. In my opinion, the shade of trees is very useful and good for bees in warm weather. And though it is often said hive entrances should face south, those which face north do as well as any in the garden.

"I think this year of 1902 has been in our

district the most abnormal season for bee-keepers in living memory. When June came in bees were very strong, and carrying in honey fairly well. Then the north-east wind came, accompanied by cold sleety showers, and continued for three weeks, by which time bees were at starvation point. Then we had about a fortnight of good bee weather. In July honey was abundant in the white clover, but bees were not strong enough to take full advantage of it. My own stocks averaged thirty 1-lb. sections per hive, which is not so bad, all things considered. Bee-keepers at local shows have told me none had more than one rack of sections per hive, and some much less than that.

"In conclusion, let me say it was as a hobby I began bee-keeping, but am very glad to say it has become a very successful hobby with me. The photo is by a local amateur, Mr. T. Dunbar, who takes a great delight in the study of the art. And also I should not close without acknowledging that my success in bee-keeping is in a great measure due to the valuable assistance I derived in my earlier years from the *Bee-keepers' Record* and the BRITISH BEE JOURNAL."

CORRESPONDENCE.

(*Continued from page* 374.)

THE PRESTON GUILD MERCHANT WEEK.

[4892.] The great Preston Guild Merchant, with its quaint old-time ceremonies, full of reminiscences of the past, has, after twenty years, come round again, and the Guild Court is adjourned to meet again twenty years hence! "Proud Preston" has for a week given itself up to processions miles in length and jollifications, ending up with a grand revel and torch-light procession on Saturday night. No mean part of the "Guild Week" was the Royal Lancashire Agricultural Society's Show held at Moor Park on September 2 to 5, 24,000 people paying for entrance on the 3rd, and 39,000 on the 4th, apart from the many who crushed in without payment at all.

The honey shed and bee tent were erected just inside the show ground to the right of the main entrance. Mr. H. Edwards lectured to large and interested audiences (punctually at the appointed times, note) and the result was some new members for the Lancs. B.K.A. The Royal Lancashire Agricultural Society is one of the oldest county agricultural associations in the kingdom, and prides itself on doing things well. Certainly the prizes offered in the honey section were liberal enough to tempt more numerous entries had the past honey season been even a moderately good one. As it was, the moderate entries resulted in the honey shed being reduced in size from what was originally intended. Lancashire men had put forth special efforts to make a brave show, and though they had few entries in the section class, the county class secured the largest entry for twelve jars of extracted honey, and an extra prize was awarded by the judges in consequence of the close competition.

It was also pleasing to see an entry of ten honey trophies, nine of which were staged. Mr. George Rose has given valuable prizes year after year in this class, and he will be well pleased to see it at last bring forth so good a display. Mr. R. himself this year secured 1st and the Lancs B.K.A. silver medal for a fine trophy, which was greatly admired, the only fault being that it required more space to show it to full advantage. The weather was very favourable, except on the morning of second day (Wednesday), and then a fierce gale that came—and went, fortunately—so suddenly as to do considerable damage, many of the tents and stands being almost wrecked. The honey-shed held, and the roof remained intact, but the staging was shaken to and fro like a tree, and nearly the whole of the sections and many honey jars and bottles were thrown to the ground, some being smashed completely; but while sympathy must be felt for those who suffered loss, it was some satisfaction to find the prize ones undamaged. It blew all Wednesday morning, but by midday Mr. Rose and several willing-handed voluntary assistants had restored things to something like order in the honey shed. A good deal of honey was sold at the show, several of the trophy exhibitors doing a big trade, and a number of local men in the twelve-jars class, by bringing in honey each day, got rid of a considerable quantity. The little knot of bee-keepers at Hesketh Bank were much in evidence, and took their share of the prize money, Mr. Rymer's trophy being an admirable example of what can be done with little expense for stands and furnishing, and the honey itself was delicious in flavour, colour, and consistency. What a district Hesketh Bank must be, all the honey shown from there being just that same "saleable article." Messrs. W. Broughton Carr and James Cragg were the judges, and no one would venture to think that these gentlemen did other than give their awards to the best exhibits. Lancashire men were particularly pleased to have "W. B. C." back again among them for a brief spell, and we rejoiced to see him looking fairly well, and found him as ready as ever to help forward the craft when we saw our old friend taking the opportunity to give a kindly and useful lesson in judging to two or three non-exhibitors who sought help in this way, and so killing two birds with one stone.

On Wednesday Mr. Carr conducted an examination of candidates for the third-class certificates of the B.B.K.A. in Mr. Rose's home apiary, Ormskirk, and as the "Roses" were all "duty bound" to be at the "Guild Show," the examiner and candidates had per-

force to take over the home and the apiary for the occasion. It had much interest for the writer to learn that "W. B. C." was at the last "Guild Merchant" domiciled as a Lancashire and Cheshire bee-keeper, and had charge of the bee department twenty years ago. On the other hand, our absent host, "G. R.," was then domiciled in Middlesex and Surrey. Such are the changes of time. May they both live to see the next "guild" under even happier circumstances, wherever they each may then be.—A BEE-KEEPER WHO WAS THERE, *September* 10.

ROYAL LANCS. SHOW AT PRESTON.

A MEAN THEFT.

[4893.] While it's no use crying over spilt milk or howling after one is hurt, it may be well, in order to put other lecturers on their guard against being made victims in similar circumstances, to place on record an act of despicable meanness which was perpetrated at the recent Preston show of the Royal Lancashire Agricultural Society. As a portion of a queen-raising exhibit I had a fine Italian queen, a black drone, and several hybrid workers in one of my "observatory" postal and introduction cages, and I was allowing this cage to be passed round for inspection whilst I was lecturing and demonstrating in the bee tent. But at the second demonstration on Wednesday, September 3, the cage and contents disappeared, stolen evidently by some bee-keepers acting in concert, as otherwise it would scarcely have been possible to have purloined an article which a number of spectators were anxious to get a sight of.—H. EDWARDS, *Expert to Lancashire B.K.A., Shrubs Hill, Sunningdale, September* 12.

BRIEF REPORTS.

HEREFORDSHIRE.

Honey is very scarce this year in this part of Herefordshire. My best hive has not given me more than 50 lb., and the average will be below 30 lb., I am afraid. I must not complain, however, as many of my brethren in the craft have done much worse than that. All my surplus granulated a fortnight after being removed from hives. Quality and colour are good, and I shall not sell at less than 9s. per dozen wholesale, or 1s. per lb. retail. I do not believe in cutting prices.—W. H., *Brilley, September* 10.

WARWICKSHIRE.

In response to the request that bee-keepers should report their honey take for 1902, I have pleasure in saying that I have taken 210 lb. from five hives, but as one of these only gave rather more than 10 lb., I have had an average of nearly 50 lb. per hive from four hives. The honey is darker in colour than last year, and began to candy within a week or two of extracting, but is excellent in quality.—S. K. S., *Birmingham, September* 11.

KENT.

I find my ten stocks are exceedingly short of stores this autumn, though strong in bees. The season here has been very poor—in fact, the worst I have had since I started four years ago—and the average per hive will hardly come to 25 lb. Those worked for sections were almost a complete failure.—W. F. L. L., *Borden, Sittingbourne, Sept* 10.

CORNWALL.

I am only a beginner, having but three stocks, but I think they have done fairly well for the season, seeing that I have taken from them fifty sections and about 140 lb. extracted honey.—J. S., *Saltash, September* 10.

STRANGE STORY.

A BEE-KEEPER'S DOUBLE LIFE.

One of the most sensational cases of a man with a double life has, says the *Star*, just come to light in the West of England. It has been discovered by the accident of death that Mr. Edmund Hall, an accountant and bee-keeper, who had resided for nineteen years at Oborne, a little village a mile from Sherborne, Dorset, was in reality Colonel Edmund Carter Plant, C.B., colonel commanding the 2nd Gloucester Volunteer R.E., master at Clifton College, with a residence and, until 1900, a wife in Bristol. The story runs thus :—

Mr. Edmund Hall had lived at Oborne without any one suspecting that the "accountant" had another side to his life. He went away from home on business, but no one was surprised at that. When he was at home he was noted for his interest in bee-keeping.

Curiously enough, that is not one of the "recreations" which "Who's Who" gives as preferred by Colonel Edmund Plant. Mr. Hall, who was about sixty, went over last Monday afternoon to the farm of Mr. Ryall, of North Wootton, in order to "drive" some bees. After this operation he was sitting at tea with Mrs. Ryall and his own little son, who had accompanied him. Suddenly he got up from the tea-table, and remarking, "I'm going to faint," fell forward and immediately expired. An inquest was held next day, and the jury returned a verdict of "Death from natural causes," *i.e.*, heart disease.

On Wednesday morning the Bristol papers appeared with long obituary notices of Colonel Edmund Plant, C.B., who was decorated in 1897 for his services to the Volunteer movement. This gentleman was a Hampshire man, who settled in Bristol in 1861, first as a science master at the old Trade and Mining School in Nelson-street, and subsequently at Clifton

College. He was married in 1865 to Miss Frances Colchester, of Ashleworth, Gloucester, a lady who died in January, 1900.

The upshot of the whole thing was that "Edmund Hall" and Colonel Plant were the same person. In the anxiety to maintain the secret of Colonel Plant's double life, the name of "Edmund Hall" was engraved on the coffin plate, which was removed to Bristol by train on Friday. It was in this single coffin that, in Arne's Vale Cemetery, Bristol, on Saturday, two identities were buried. Colonel Plant's coffin was covered with a Union Jack, and the inscription on the plate was: "Edmund Carter Plant, C.B., Colonel Bristol Engineers. Died September 1, 1902. Aged 60 years."

The reasons for the strange double life so long maintained have not been disclosed, but the correspondent states that the dead man's surviving children at Oborne were entirely unaware of his real identity until after his death.—*Western Mercury.*

NORTHUMBERLAND AND DURHAM B.K.A.

Owing to the very unfavourable bee-season of 1902, the committee of the above association have decided to cancel their honey show arranged to be held in Newcastle on October 4. They greatly regret the circumstances which have compelled them to take this course, and trust that the members and others interested in the association will uphold their decision by attending a meeting in the Y.M.C.A. Institute, Newcastle, on October 4 at 5 p.m.

The annual honey show is the usual rendezvous for bee-keepers "young and old," meeting each other and comparing notes; and although the show is reluctantly cancelled, it is hoped that the proposed meeting will prove a rallying point for the brotherhood known as the N. and D. B. K. Association.—JAS. WADDELL, Hon. Sec., *Wooler, September* 13.

Queries and Replies.

[2966.] *Destroying Diseased Bees.*—I have ten hives of bees, and they have done very well this year, but I am sorry to say one hive has developed foul brood. The bees are fairly strong, and have plenty of honey in the frames below; they also have put 6 lb. in the sections I gave them on the top. I have decided to destroy the bees, burn the frames, quilts, and sections, and then proceed as you advise in the "Guide Book," as nine hives of bees will be quite enough for me, as I do not get time to look after so many. I should be much obliged if you would kindly tell me:—1. What is the best way to destroy bees in a hive with section-rack on? 2. Is it safe to use the honey they have stored in the top six sections I mentioned?

The hive next to the above has given me 42 lb. of surplus this year. The one on the other side has swarmed and stored about 21 lb. of surplus. I take in the BRITISH BEE JOURNAL every week, and find it most interesting. Swarms have been very numerous here this year, but little honey was made till July.—D. L. S., *Pound Hill, Worth, Crawley, Sussex.*

REPLY.—1. Make a hole in the ground large enough to hold the lid of an old mustard tin, into which tin "lid" put a tablespoonful of sulphur. Drop a red-hot coal into the sulphur, and at once set the hive over the hole, seeing that the bees have no way of escape; in about one minute the bees will be dead. 2. Yes.

[2967.] *Building up Stocks from Driven Bees.*—I drove the bees from a straw skep on September 9, and placed them in a frame-hive, fitting the frames with full sheets of comb-foundation, and have since gently and regularly fed them. Will the queen start laying now, and the stock become safe for wintering? There was a lot of brood in the skep, but it was destroyed.—A. G. H., *September* 12.

REPLY.—Much depends on the number of bees got from the skep. It is usual to unite the bees from two skeps when building up a colony from driven lots in autumn. You had better confine the bees to about five frames and feed rapidly, also taking every means (by giving plenty of warm coverings) to conserve the heat in the hive while comb-building is in progress. It is a great pity the brood in skep was destroyed, when it is so easy to get sealed brood hatched out. The resultant young bees would have formed the backbone of the colony had they been preserved.

[2968.] *Bee-keepers in Central India.*—A friend of mine is shortly going out to India. Can you favour him with the name of some bee-keeper in the Central Provinces, say near Hoshangabad, Harsi, Bhopal, Sohagpur, or Sioni Malwa who, could help my friend in starting? I do not want to unduly burden you with a reply, but a helping hand to a novice would be most welcome.—R. B., *Southampton, September* 9.

REPLY.—We have several subscribers in India, but cannot fix upon one near the point named. Perhaps some reader better informed than ourselves will send a line of reply for insertion.

[2969.] *Re-queening Driven Stocks of Bees*—On September 1 I put two lots of driven bees into a new hive; they united satisfactorily, no fighting, but on examining them four days later I could find no queen or brood. This was on Friday, and we looked again on Sunday morning, with same result. I therefore introduced another queen, which I find

this morning has been killed. Do you think there is already a queen in the hive, or should I introduce another one?—FRANK KING.

REPLY.—It would appear almost certain that one of the queens is in the hive; and no further attempt at re-queening should be made without a good search for the queen (or eggs) presumably now with the bees.

[2970.] *Re-queening Hives.*—I intended to allow several of my stocks of bees to re-queen themselves this year, and in doing this removed the queens from two of my best stocks on August 15. Eight days afterwards I removed the queens from four other stocks. I then, on the 25th, took queen-cells from the first hives mentioned, and put them in the centre of brood-nest of the other four stocks. All the queens emerged from cells, but none of them have begun to lay yet, and nearly all the drones are killed off. Kindly oblige through BEE JOURNAL what I had better do. —M. H., *Tunbridge Wells, September* 9.

REPLY.—The only thing you can do is to make another examination, and assure yourself that young queens are in each hive. Then, if there is drone-brood in worker-cells, the queens will be worthless; but if worker-brood is found, they will be all right. The queens will, if there, show one or other of these results.

Echoes from the Hives.

Church Mill, Standlake, September 12.—I am sending you an "echo" from mid-Oxon. The bee-season has been an adverse one, with the exception of about three weeks in June and July. The whole of the springtime was wet and stormy, quite up till the middle of June, when a spell of real bee-weather caused the bees to swarm in all directions, and started them to work in supers, with the result that our average "take" exceeded that of last year, being 48½ lb. of surplus per hive. The honey-flow practically lasted only a month, and the bees have been living on their stores since the beginning of August.—D. J. H.

PRESS CUTTING.

THE MUSIC OF PARADISE.

I am sitting in my garden, and everywhere around me the hot, hazy summer air is full of sounds—a lark singing far up above the livid green fields, a hen cackling presumptuously down in the hamlet because she has laid a golden egg, a sheep bleating over on the hill, and the school bairns making merry at their summer games.

But it is not of any of these sounds I am thinking as I sit and watch beneath the shade of the lilac trees. I am listening lazily to the constant hum of bees which fills the garden on this hot summer noon—the sound that makes the music of Paradise, that lulls to sleep the busiest man as he reclines at ease and gives the good God thanks that at last the whole earth is decked in its pomp of summer splendour. Yet why is it ordained that bees will undertake their busiest work on the hottest and sultriest day, when man is at his laziest, and can do nothing but dream through his hours in the coolest, greenest spot of woodland shade? But so it is. To venture into the open on this day of merciless sun is to be frizzled and baked and melted into a limp mass of perspiring humanity.

To be a bee-keeper is to be full of anxious thoughts when the mind of other men is calm and quiet. There is nothing for it but to rise up and swathe the head and neck in a gauzy veil as he approaches the little row of hives in the corner yonder. One would think the bee colony had risen in revolt. And so it has. When the bees swarm everything else must wait. The most serious man, no matter how occupied, must rise and run to hive the swarm.

Moreover, bees form a comradeship between men of all sorts and conditions. To keep bees is to be the friend of every bee-keeper. And when the bees swarm friend must run to help friend. So, after a day of sweltering heat, when the bees were all secure and the shadows were falling cool and refreshing in this garden at Fairshiels, the bee-keeper was suddenly summoned from his well-earned leisure. Who was it? One bearing news. A swarm of bees was hanging on the roadside wellnigh a mile and a half off! A fine, big, first swarm! Whose were they? Who had a right to them? The first on the spot. No one claimed them. No one had followed them. So a council of war is held, and three comrades in bee-craft set off—one with a skep, another to be initiated into the gentle art of bee-stealing, and the bee-keeper following on his "bike." Arrived at the spot, there are the bees hanging in a great pear-shaped cluster against the blue sky. The branch of the tree from which they hang is within reach of an outstretched arm. It is an easy and a speedy capture, the bees being shaken into the skep, then turned up and secured in a white sheet tied with string. Then home! Thus are we kept in excitement at Fairshiels in the long, hot midsummer days when the bees begin to swarm, and in the long, still midsummer nights a sound of buzzings innumerable runs through the dreamland of our sleep, and we rest on pillows sweet with the scent of honey and of heather."—Condensed from *The People's Friend.*

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of August, 1902, was £3,179.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Bee Shows to Come.

September 18, 19, and 20, at Crystal Palace.—Kent and Sussex B.K.A. Annual Exhibition of Bees, Honey, and Appliances.

September 18, 19, and 20, at Crystal Palace.—Surrey B.K.A. Annual Exhibition of Bees, Honey, Wax, and Appliances, &c.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the seventh Annual Exhibition and Market of the Grocery and Kindred Trades.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute. (The above Show has been cancelled.)

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

F. H. P. (Great Crosby).—*Do Bees Gather Pollen Promiscuously?*—The bee when pollen-gathering acts much as it does when visiting flowers for honey, *i.e*, it keeps to one variety of flower.

C. H. B. (Newmarket).—*Wax Moth.*—1. Yes, as you suppose the sample of larvæ is the true wax-moth (*Galleria cereana*). 2. Sample of candy is fairly good and soft, but the grain might be more smooth like the fondant sugar in chocolate creams.

P. C. (Grantown-on-Spey).—*Forming Bee-keepers' Associations.*—Bee-keepers' Associations in any part of the United Kingdom may become affiliated to the parent body in London if it is so desired. For information on the point write the Secretary, B.B.K.A., Mr. E. H. Young, 12, Hanover-square, London, W.

L. S. C. (Ilkley).—*Compulsory Powers for Dealing with Foul Brood.*—With regard to your question "What efforts have been made in the past for obtaining legislation on the subject of foul brood" we may say a very considerable amount of effort was expended and heavy expenses incurred by the B.B.K.A. some few years ago in the direction mentioned. By writing to the Secretary of the Association you could obtain printed evidence of this. Among other things a Bill was drafted having for its object the obtaining of compulsory powers for the better prevention of foul brood, the full text of which appeared in our issue of May 21, 1896.

G. W. (Waltham Abbey).—*Wild Bees' Nomenclature.*—In "making a collection of wild bees," as proposed, you will find valuable information in the series of articles on the subject by Mr. F. W. L. Sladen, which appeared in our pages some time ago, and which may be had from this office at 1d. per copy.

W. R. (Aberdeenshire).—*Bee-keepers' Association.*—We are not aware of any B.K.A. for Aberdeenshire; perhaps some Scotch reader will say if such an association exists.

R. HUNTER (Clonmel).—*Bees and Wasps.*—The only protection you can give the bees attacked is to reduce the entrance to ½ in. in width, and set traps of sweetened water in bottles to catch the marauding wasps.

E. ORCHARD (Wilts).—*Insurance for Bee-keepers.*—Your last letter was wrongly addressed to this office instead of "Secretary, B.B.K.A., 12, Hanover-square, London." How was the earlier one (enclosing P.O.) addressed? If you will enlighten us on this point we will reply by post. The B.B.J. has, of course, no official connection with the Insurance Scheme of the B.B.K.A.

D. VALLANCE (Dunaskin).—*Drones and Queen-mating.*—The drone sent simply shows the usual or normal signs of having mated with a queen.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

R. T. (Cowbridge).—We find no disease in comb, but as the queen is evidently a drone breeder, the bees will now be worthless.

E. S. (Saltash).—The comb contains no disease, and being quite new with its first batch of brood in cells, the stock in frame-hive will be quite safe.

J. G. (Sissinghurst) and J. A. (Sheffield).—Comb is affected with foul brood.

J. O. C. (Cornwall) and A. B. C. (Cornwall).—We find no trace of foul brood in sample, but as the comb looks suspicious melt it down for wax.

Honey Samples.

A. G. H. (Aberdeen).—Sample of honey is quite ripe, and we see no reason why it should not keep well if properly cared for in a warm, dry place.

A. B. (Scotland).—The flavour of both honeys sent is a little peculiar, but we do not trace *sugar* in either samples.

J. M. B. (Atherstone).—No. 1 is a good, well-flavoured honey. Not at all "too thin" to keep well if properly cared for. No. 2 is only fair in quality, but of good consistency, and will keep well. It is not nearly so good as No. 1.

CYMRAES (Anglesea).—The sample is an excellent honey, good in all respects, and we can understand its getting first prize.

*** *Some interesting letters and queries received late are in type, but unavoidably held over till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

BEE-KEEPERS' CONFERENCE ON OCTOBER 9

The monthly meeting of the Council was held at 105, Jermyn-street, on Thursday, 18th inst., Mr. T. I. Weston occupying the chair. There were also present Dr. Elliot, Messrs. R. T. Andrews, W. Broughton Carr, W. H. Harris, W. F. Reid, and the Secretary. Apologies for absence were received from the Hon. and Rev. H. Bligh, Colonel Walker, Mr. H. G. Morris, and Mr. E. D. Till.

The minutes of the previous meeting were read and confirmed. The following new members were elected, viz. :—Mr. L. S. Crawshaw, Burnside, Ilkley ; Mr. C. E. Freeman, Chiltern Hills Apiary, Wendover, Bucks ; Mr. F. A. Kent, 21, High East-street, Dorchester ; Mr. David Morgan, Aberpedwar Farm, Llandovery ; Mr. Walter Oddy, Alpha Cottage, Fordington, Dorchester ; Mr. Basil H. Wilkinson, 35, Old Jewry, E.C.

The report of the Finance Committee, presented by Mr. Weston, gave particulars of the receipts and expenditure to date. A list of cheques required was brought forward, and, together with the report, duly approved. An application from the Cheshire Association for services of an examiner on September 27 was received and agreed to.

Reports on examinations recently held at Boston, Budleigh Salterton, Chester, Clutton, Derby, Dudley, Melton Constable, Moorgreen, Preston, Reading, Swanley, and Uttoxeter were presented, and it was resolved to award certificates to the following candidates, viz. :—Mrs. Sykes ; Misses M. Ardington, Badcock, E. Bourne, M. A. Bowen, W. E. Brenchley, F. E. Bury, E. W. Butler, W. M. Buttenshaw, C. M. Douglas, M. Draper, M. Emlyn, M. English, S. Fenoulhet, S. Grundy, Hibbert, H. Hughes-Jones, Lilly Hughes-Jones, Jackson, Johns, L. Livesay, Millard, G. Mordaunt, M. Murrell, Parry, A. M. Perry, F. T. P. Poyer, O. M. Robert, M. Dagmar Sillar, J. Smith, R. H. Swaine, M. W. F. Unwin, V. S. Whetsham, M. M. Whiting, H. Wimpress, and W. H. Young ; Messrs. L. Brigge-Wither, J. W. Brewer, G. Carnell, Henry Crook, L. S. Crawshaw, Wm. Dirham, K. D. Flower, Robt. Furse, A. C. Greenfield, A. P. Hotten, Saml. King, E. J. Le Francois, John Littleproud, Saml. Livsey, Horace Mackender, Arthur Newstead, Rowland Parker, jun., E. H. Powell, Joseph Price, W. U. Simons, Thomas Stevens, L. McNeil Stewart, Geo. Taylor, Joseph Tinsley, Jno. Waller, and J. E. B. Whitelaw.

An examination of candidates for 2nd-class certificates will be held on Nov. 14 and 15.

The Secretary brought forward a statement showing the number of stocks registered under the Association's insurance scheme, together with the premiums paid thereon.

Correspondence on various matters was read and dealt with by the Council.

In accordance with a decision arrived at some time ago arrangements were made for a conference of representatives of county associations to be held on Thursday, October 9, for the purpose of furthering the interests, economical working and general welfare of the various societies, and conducing to the establishment of more intimate relations between the B.B.K.A. and its affiliated Associations. The Secretary was instructed to issue invitations to the meeting.

The conference will be followed by a *conversazione*, at which the topics for discussion will be "Brace-combs," "Dividers," "Quilts," and "Smokers."

The next meeting of the Council will be held on Thursday, October 23.

THE GROCERS' EXHIBITION.

HONEY SHOW AT THE AGRICULTURAL HALL.

After a busy week occupied in transforming the numerous handsome stands of the Confectioners and Bakers' into equally attractive ones of another kind, the seventh Annual Exhibition of the Grocery and Allied Trades opened on September 20 and continues till Saturday next, the 27th. As was the case last year, the honey section was transferred from the ground floor to the gallery, where, if less prominently before the bulk of visitors, it afforded bee-keepers a better chance of inspecting their own portion of the show in comfort and without crowding.

In common with the reports of every honey display this year, there must be the usual preface of a bad honey season to account for lessened entries, and the "Grocers'" was on exception, but to the general rule it was very satisfactory indeed to see not only a good display, but some of the best stuff the country has seen this year. We need not occupy space with the respective classes ; they were much in line with the show at the same hall a week ago. Only four Trophies of Honey were staged, and as they were all good ones, it was gratifying to the judges—and, no doubt, satisfactory to the exhibitors—to be able to award a substantial money prize, &c., to each ; for it is no light matter to set up a handsome trophy and have to take it down and home again with only labour and outlay for one's pains.

We were also pleased to see the "selling classes" rather better represented than at the Confectioners', though, for the reasons stated above, they fell short of our expectations.

Messrs. W. Broughton Carr and T. I. Weston officiated as judges, and made the following awards :—

Display of Honey (comb and extracted) and Honey Products, shown in suitably attractive form for a tradesman's window (4 entries).—1st—£4 and B.B.K.A. Silver Medal, F. W. Woodley, Camp Stores, Compton, Newbury, Berks ; 2nd—£3 and B.B.K.A. Bronze Medal

L. McNeil Stewart, Claremont-terrace, Hextable; 3rd—£2, C. W. Dyer, Compton Crossing, Newbury, Berks; 4th—£1, C. H. Poulton, Aspenden, Buntingford, Herts.

Twelve 1-lb. Sections (17 entries).—1st—£2, F. W. Woodley; 2nd—£1 10s., C. C. Hill, Willoughton, Cliff, Lincoln; 3rd—£1, S. Bailey, Horsham, Sussex; 4th—10s., A. Hunt, Newark; 5th—5s., F. A. Kent, Dorchester; v.h.c., F. Burrell, Great Barton, Bury St. Edmunds; v.h.c., W. Blakerman, Ovington, Alresford, Hants; v.h.c., H. Cleaver, Leamington Spa.

Twelve 1-lb. Heather Sections (12 entries).—1st—£1 5s., James Kerr, Milldam Head, Dumfries; 2nd—£1, W. Thompson, Wooler, Northumberland; 3rd —15s., G. Walton, Windermere; 4th—10s., J. M. Balmbra, Alnwick.

Three Shallow Frames Comb Honey (7 entries).—1st—£1 5s., L. McNeil Stewart; 2nd—£1, J. Merrells, Thetford, Norfolk; 3rd —15s., F. A. Kent, Dorchester; 4th—10s., E. C. R. White, Newton Tony, Salisbury.

Twelve 1-lb. Jars Extracted Honey (light) (29 entries).—1st—£2, L. McNeil Stewart; 2nd—£1 10s., F. W. Woodley; 3rd—£1, James Kerr; 4th—10s., C. W. Dyer; 5th—5s., W. H. Woods, Hemingford Grey, St. Ives, Hunts; v.h.c., S. Temblett, Andover, Hants.

Twelve 1-lb. Jars Extracted Honey (medium colour) (18 entries).—1st—£1 5s., Mrs. Kirby, St. George's, Bristol; 2nd—£1, E. R. Nash, Smarden, Kent; 3rd —15s., F. J. Old, Piddington, Northampton; 4th—10s., W. Blakeman, Ovington, Alresford, Hants.

Twelve 1-lb. Jars Extracted Honey (dark) (11 entries).—1st—£1, Jas. Kerr; 2nd—15s., J. Adams, West Haddon, Rugby; 3rd —10s., Jas. Lee & Son, Silver-street, Holborn, W.C., and Monk's Acre, Andover.

Twelve Jars Heather Honey (12 entries).—1st—£1 5s., Jas. Lee & Son; 2nd—£1, J. Waddell, Wooler, Northumberland; 3rd —15s., T. Hood, Pickering, Yorks; 4th—10s., W. Sproston, Great Haywood, Staffs.

Twelve 1-lb. Jars Granulated Honey (7 entries).—1st—£1 5s., Jas. Lee & Son; 2nd—£1, F. W. Woodley; 3rd—15s., R. Allen, Tusmore, Bicester; 4th—10s., Rev. H. Goffe, Thoresway Rectory, Caistor, Lincs; h.c., J. Adams, West Haddon, Rugby.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Package, suitable for retail counter trade (7 entries).—1st—£1, A. Hunt, Newark; 2nd—15s., F. W. Woodley; 3rd—10s., L. McNeil Stewart; 4th—5s., W. Blakeman.

Beeswax, judged for quality of wax only (8 entries).—1st—£1, E. C. R. White; 2nd—15s., J. Gedge, Penryn, Cornwall; 3rd—10s., F. W. Woodley; 4th—5s., L. McNeil Stewart.

HONEY SELLING CLASSES.

Extracted Honey in Bulk—by Sample with price (8 entries).—Certificates of merit awarded to:—W. H. Woods, Hemingford Grey, St. Ives, Hunts; A. Curmow, Marzione, Cornwall; H. Swift, Churchdown, Cheltenham; H. Pears, Mere, Lincoln; and Rev. C. S. Nevill, Wickenby Rectory, Lincoln.

Extracted Honey in 1-lb. Jars—by Sample with price—(6 entries).—Certificates of merit awarded to:—R. W. S. Merrett, Churchdown, Cheltenham, and H. M. Turner, 4, Turl-street, Oxford.

Sections by Sample, with price per doz.—Certificate of merit to J. C. Roberts, Holland-road, Maidstone, Kent.

CHESHIRE B.K.A.

HONEY SHOW AT BRAMHALL.

The annual show of the Bramhall and Woodford District Horticultural Society was held on September 6 in the grounds of Bramall Hall by permission of Chas. H. Nevill, Esq., J.P. The honey section was very successful, though the entries were not quite so numerous as last year, and in the local classes the honey was darker in colour. There was a lecture and demonstration in the bee-tent under the auspices of the Cheshire County Council which attracted a large and attentive audience, Mr. F. H. Taylor, Fallowfield, Manchester, being the lecturer. Mr. Taylor also judged the honey, &c., and made the following awards:—

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, J. Pearman, Derby; 2nd, Rev. E. Charley, Ince, Chester; 3rd, A. Thorpe Wistaston, Crewe.

Twelve 1-lb. Jars Extracted Honey.—1st, J. Pearman; 2nd, S. Temblett, Andover; 3rd, W. H. Higley, Kidderminster; v.h.c., Rev. E. Charley; C. S. Wright, Wilmslow, and T. Sleight, Pilsley, Chesterfield.

Beeswax.—1st, J. Pearman; 2nd, S. Wright; 3rd, W. P. Young, Patricroft.

LOCAL CLASSES.

Twelve 1-lb. Sections.—No entries.

Twelve 1-lb. Jars Extracted Honey.—1st, Mrs. Bull, Bramhall; 2nd, Jas. T. Fernley Cheadle, Hulme; 3rd, Geo. Johnson, Bramhall.

Beeswax.—1st, J. Turner, Bramhall.—(*Communicated.*)

DERBYSHIRE B.K.A.

ANNUAL SHOW.

The annual show of the Derbyshire Bee-keepers' Association was held on the show ground at Derby in conjunction with that of the Agricultural Society on September 10 and 11. Notwithstanding the fact that the past season has been a poor one for bee-keepers in the county, some honey of excellent quality was staged. The Challenge Cup offered by J. L. P. Barber, Esq., J.P., President of the D.B.K.A.,

for the best trophy of honey was won for the third time in succession by J. Stone, Cubley.

Mr. C. N. White, St. Neots, Hunts, officiated as judge of the honey section and made the following awards :—

Observatory Hive, with Bees and Queen.—1st, A. H. Dawson, Tatenhill ; 2nd, J. Pearman, Derby ; 3rd, C. Spencer, Beighton.

Observatory Hive (one or more frames), with Queen and Bees.—1st, H. Hill, Ockbrook ; 2nd, J. Pearman ; 3rd, S. Durose, Burton-on-Trent.

Trophy of Honey (Challenge Cup and Special Prize).—1st, J. Stone, Cubley ; 2nd, T. Austin, Ockbrook ; 3rd, H. Hill.

Twelve 1-lb. Sections.—1st, J. Stone ; 2nd, J. Pearman ; 3rd, S. Durose.

Twelve 1-lb. Jars Extracted Honey (light).—1st, S. Durose ; 2nd, A. H. Dawson ; 3rd, J. R. Bridges, Hardstaff.

Twelve 1-lb. Jars Extracted Honey (dark).—1st, S. Durose ; 2nd, A. H. Dawson.

Beeswax.—1st, J. Pearman ; 2nd, H. Hill ; 3rd, J. Stone.

Honey Trophy (cottagers only).—1st, J. Pearman ; 2nd, A. H. Roland, Burton.

Eight 1-lb. Sections and Twelve 1-lb. Jars Extracted Honey.—1st, F. M. James, Ashbourne.

OPEN CLASSES.

Twelve 1-lb. Sections.—1st, J. Stone ; 2nd, S. Durose ; 3rd, G. Hill, Cambridge.

Twelve 1-lb. Jars Extracted Honey.—1st, A. H. Dawson ; 2nd, J. Smart, Andover ; 3rd, R. Brown, Somersham, Hunts.

Twelve 1-lb. Jars Granulated Honey.—1st, J. Berry, Llanrwst ; 2nd, A. H. Dawson ; 3rd, S. Durose.

Single 1-lb. Section.—1st, G. Hill ; 2nd, J. Stone ; 3rd, R. Brown.

Single 1-lb. Jar Extracted Honey.—1st, A. H. Dawson ; 2nd, R. Brown ; 3rd, J. R. Bridges.—(*Communicated.*)

LEICESTERSHIRE B.K.A.

This association held an exhibition of honey, &c., in connection with the Loughborough Agricultural Society's Show in Southfields Park, Loughborough, on September 17. The entries were rather less than those of the previous year, but the quality of the exhibits was all that could be desired. Mr. W. P. Meadows, Syston, kindly officiated as judge, and made the following awards :—

OPEN CLASSES.

Twelve 1-lb. Jars Extracted Honey.—1st, J. G. Payne, Lutterworth ; 2nd, J. Waterfield, Kibworth ; 3rd, S. Sprag, Melton Mowbray.

Twelve 1-lb. Sections.—1st, J. Waterfield ; 2nd, H. Bott, Market Harborough.

Single 1-lb. Jar Extracted Honey.—1st, J. G. Payne.

LOUGHBOROUGH DISTRICT ONLY.

Six 1-lb. Jars Extracted Honey (light).—1st, A. Brown ; 2nd, S. G. Godkin.

Six 1-lb. Jars Extracted Honey (dark).—1st, G. J. Levers ; 2nd, Mrs. Spence.

Six 1-lb. Sections.—1st, J. J. Jones ; 2nd, G. J. Levers.—JOHN WATERFIELD, Hon Secretary L.B.K.A.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

****** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

SOME MORE "FACTS" ABOUT QUEENS,

AND SOME "FANCIES" CONNECTED THEREWITH.

[4894] This is an age of progress. The facts of yesterday become the fancies of to-day ; and the knowledge of to-day stands a good chance of being of purely archæological interest a week hence. 'Tis true that "facts are stubborn things," also that a "fact" has been designated "a lie and a half" ; and whilst it is possible that some (Editors included) may scoff at the idea of a queen being reared and laying in ten days, it is even more possible that I may be dubbed a full-blown member of the Ananias fraternity when I proceed to still further shorten the necessary period to *three days only!*

It happened thusly : On Monday morning, August 4, the queen and the whole of the unsealed brood was removed from a hive, numbered 13 in my apiary, in preparation for queen-raising, and during the afternoon of the same day a prepared cell-raising frame, fitted with cell-cups containing just hatched larvæ, was given to the (otherwise) *hopelessly queenless* colony. On Tuesday morning, about half past nine, a small swarm was seen on the wing. The bees composing it swung round in the air for some quarter of an hour, and eventually settled upon the front of No. 32 nucleus, and commenced to draw in. Opening this hive the colony (on six combs, my divisible half standard) was found crowded for room, a condition which was remedied by giving them an extra (dry) comb. On Friday morning this nucleus colony, still showing signs of restlessness, was again examined, and a further (dry)

comb given, the one given on Tuesday being found full of eggs and just-hatched larvæ. On Sunday morning, August 10 (I had only reached home just before midnight on Saturday) a peep was taken at No. 13 to see how the queen-cells were getting on. Consternation! Every cell had been destroyed. The reason was quickly obvious, for the combs on either side of the queen-raising frame were found filled with eggs and just-hatched larvæ, and on one of the combs a fine young queen was found. Opening nucleus No. 32, the bees of which still showed signs of restlessness, the comb given on the previous Friday was found filled with eggs, *but no queen could be discovered*. Whilst the examination was proceeding the colony again took wing, and, later, returned; but whether or not any further "swarming" took place it is impossible to say, as with the exception of Monday (Bank Holiday) and from 10.30 p.m. Thursday to 9.30 a.m. on Friday, I was away from home all the week.

To cut a long story short, it may be stated that during the next few days No. 32 started queen-cells, and that no queen was missing from any other hive; and thus we are brought face to face with the seemingly almost incredible fact that the queen of No. 32 was in her own colony and depositing eggs there (*vide* the comb given) on Tuesday; on Wednesday (*vide* the hatching larvæ) she must have been in No. 13; on Friday or Saturday (*vide* the eggs in the second comb given) she must have been back in her old quarters; and by Sunday morning she had migrated again to No. 13 where she was discovered.

The foregoing are the "facts." Now for the "fancies." My theory is that the bees of No. 13, realising their desperate condition—a necessary condition, according to the method I employ, precedent to getting cells started over selected larvæ—sent a deputation to the queen of No. 32, who accepted their overtures. Her departure probably occasioned the swarming noticed on the Tuesday, though the *fact* remains that she must have been in her rightful home almost immediately after the swarming took place, otherwise it would not have been possible for larvæ to be hatching seventy-two hours later, unless the time in the egg stage can be modified by the bees to the extent of acceleration as well as retardation—the latter being well known and recognised.

Applying the foregoing facts to those related by J. M., Pontypridd, on page 345, it is not difficult to assume that his bees have become possessed of a queen in much the same manner as did my No. 13 colony. That the queen his colony now has was raised after the division of his original colony is beyond the bounds of possibility.

Now for some more facts which tend to upset established theories. At Taplow, Bucks, a heavy swarm came off in June. It settled somewhat awkwardly, and the owner (a lady) was prevented from properly hiving it by a heavy storm, which suddenly came on after the major portion of the bees had been shaken into a skep. The balance of the bees, still remaining in the hedge, was offered to and taken away next day by the under gardener, and both lots seemed to be doing well. When I examined the lady's portion in July, I found the bees had built nothing but drone-comb, in which they had stored a considerable quantity of honey, but there was neither queen nor brood of any sort present. What made the half-swarm remain without a queen?

Early in June I sent a queen to a customer in Lancashire, who had found a populous hive queenless, cautioning him to be very careful that a virgin queen was not left in the hive. I met him at the Preston show last week, and felt some astonishment when he informed me that the new queen had been safely introduced, but that on the morning following her release he had found a dead virgin on the alighting-board. Did the bees realise that the stranger was better than the queen of their own raising?—H. EDWARDS (Expert, 2nd Class), *Shrubs Hill Cottage, Sunningdale, Sept.* 12.

HIVING DRIVEN BEES.

MY FIRST EXPERIENCE.

[4895.] A friend and myself, having lately caught the "bee-fever," decided to take up the hobby, and under the advice of a successful and friendly bee-keeper we became BEE JOURNAL readers, and bought a hive each, which we set up in some allotment gardens. We began by ordering two 4 lb. lots of driven bees, and our friend promised to show us how to transfer the bees to the new hives. Unfortunately, the bees arrived later than expected, and, in consequence, our friend was not available, and had to send us instructions instead, the said instructions being: first, to operate on the evening of the day on which the bees arrived. We were then to unfasten the lid, hold the box over the hive, give a smart rap or two on the box and the bees would fall on the frame-tops, them cover them lightly with the quilt, replace the roof, and leave the bees to pass down into the brood-chamber, when we could put on the rapid feeders. All was quite simple, and little risk of being stung.

Before commencing operations I began by tucking my trousers into my socks, and got my gloves on. My companion had left his gloves at home, but, nothing daunted, he began to "rap" the bees, while I stood ready to pop on the quilt. But the bees did not seem inclined to leave the box, and the more my friend rapped the tighter they clung to the inside thereof. Not to be beaten I began to stroke the bees into the hive with my gloved hands, when they immediately began to crawl up my sleeves, stinging my arms as they marched. We managed, however, to

stroke all out but a few, and then the fun began. The bees took wing, and surrounded us on mischief bent; they got up my friend's trouser legs and up his sleeves; some were crawling all over my chest and back (inside my shirt) and stinging vigorously, in fact we were in "a warm corner," and decided to beat a retreat. We put on the roof and retired to a safe distance in order to rid ourselves of the bees, and in doing this noticed that those which settled on our faces, necks, and hands did not sting us at all, it was only when they were pressed inside our clothes; so casting aside all orthodox methods, my friend bared his chest and arms, and returning to the hive he eventually got the bees into the body-box and placed on the quilt, when they settled down. I emptied the box into the second hive, and we had no difficulty with them at all; the bees left the box and settled into the brood frames in the course of a few minutes. We had no bee-smoker, but used our pipes during the operations. Neither of us were stung on the face; my friend escaped with only two or three stings, and though I was stung a good deal on the arms and body, the stings did not affect us to any extent, as the pain subsided in a little while. Taking into consideration that this was our first experience, we were satisfied, and hope to get safely through the winter, and have a successful season next year.—J. E. W., *Leicester, September* 17.

OUR "SCIENCE" CORNER.

[4896.] It gave me very great pleasure to see the paper, written by my friend, Mr. William Heining (4866, page 333), suggesting a science corner (where object-lessons in botany, entomology, and taxidermy are periodically given), favourably commented upon by Mr. "D. M. M.," and doubly glad was I to see that he associates the name of Mr. F. W. L. Sladen with the entomology department, as I feel sure that his articles would be a most valuable acquisition to our journal, and I think, perhaps, as is done in many other scientific papers, the Editors might, through the paper, request the names of gentlemen who would assist in this direction, when we have reason to expect that some very interesting contributions would be constantly published and raise the scientific aspect of our paper. But before this can take place I, for one, should like to see some encouragement from would-be natural historians, as the amount of work entailed in accurately writing a short article is more than is generally imagined, and the writer most assuredly secures consolation in knowing that the fruits of his labours are being appreciated.

Also I think it would encourage the Editors in sanctioning this departure, did they receive communications from any one so interested.

Finally, I have much pleasure in volunteering my small assistance, and hope, with our friend, Mr. "D. M. M.," Banff, that the "Science Corner, Illustrated," will be shortly made manifest, and that it will meet the support of all enthusiastic bee-keepers.—HERBERT SHORTHOUSE, M.P.S., F.C.S., &c., *Sept.* 18.

MY BEE EXPERIENCES.

[4897.] In April, 1901, a kindly disposed brother-in-law presented me with a stock of bees along with various appliances and paraphernalia connected with bee-keeping.

The hive was brought to my garden in spite of my protestations that I know nothing of bee management, and when I tell you that they were a particularly "vicious lot' you will understand my regarding them with no friendly feelings. It may be asked, "Do I still so regard them?" I answer, "Not by any means." Although owing to ignorance and inattention I lost two fine swarms a month after my start, yet I got that year 56 lb. of honey from supers.

Having safely wintered the colony I fancied myself well on the way to become a bee-keeper, but I got over confident and tried my hand at artificial swarming and failed, not that my plan was faulty in inception, but the "idea" was not sufficiently permeated with either science or experience.

The fresh colony I made got on all right for a while; then the bees' energies seemed to flag, and in the end they became queenless and succumbed to robbers.

The parent hive also did badly, and failed to store any surplus honey. However, they raised a new queen all right.

I have during this summer attended a forty-five minutes' lecture and demonstration by an expert at an agricultural show, and this proved of greater service than all my reading of bee-literature, much of which is merely "Greek" to the uninitiated, but which is made clear enough by a good bee-demonstrator.

A day or two after the lecture referred to, I accepted the offer of a colony of bees for the trouble of "driving." I chose the evening of a fine day, and found the stock in a cheese-box, and the difficulty in fixing the skep on the wooden cheesebox was successfully overcome, and the driving process satisfactorily got through, though it took some time, and the queen managed to elude all observation in the process. The cheesebox contained 40 lb. of honey.

Next morning the bees were safely transferred to the hive mentioned after it had been thoroughly disinfected. This happened a fortnight ago, and, being anxious about the queen, I carefully examined the frames to-day, but failed to find her; nor was there any sign of brood, so I regretfully concluded that the bees were queenless.

An hour later, on approaching the hive to give some syrup, I was attracted by a loud humming, which could be heard yards away.

Wondering what it meant, I was about to uncover the hive when I noticed in the grass a small cluster of bees, about a dozen or so, and in their midst the queen! I lost no time in tenderly picking up and returning her to her subjects by putting her in the hive at the top, when the "tune" was changed instantly, I hope for one of welcome home on her return.

I have already spun this yarn beyond my first intention. I therefore conclude by saying, eighteen months ago the hobby was thrust upon my unwilling acceptance, now I love every bee I come across.—J. L., *Penrhiwceiber, September* 17.

P.S.—Can you tell me what will happen in the driven colony referred to above, which is a strong one but absolutely without a single drone, as far as I can see? Will the queen produce eggs without drones? And will it be safe to transfer drones from another hive? —J. L.

[We had best advise you to invest in a copy of a "Guide Book," as being indispensable to any beginner in bee-keeping. You will then learn, along with other information, how queen-mating takes place, and how unnecessary drones are to a queen once mated.—EDS.]

BEE NOTES FROM DERBYSHIRE.

QUEEN INTRODUCTION.

[4898.] I had an experience somewhat similar to that of "J. M." (4876, August 28) in the same week. I removed a frame of bees, with old queen, from a hive for show purposes, and two days later, in place of the one taken away, substituted another frame with bees and a young queen. I examined the hive a week later, and found on one frame a queen-cell. I may say the bees introduced along with the young queen had all been killed off, as they lay dead outside the hive next morning. I thought they had killed the queen too, and were rearing another, but, having spare queens on hand, I pulled the capping of the queen-cell off, and the queen was hatching all right. I was about to shut the hive down and give the bees another queen, but looked the frames over to make sure no other queens were hatching, and found the queen, and she had already laid about a dozen eggs.

The end of the bee season for 1902 has been like feeding up driven bees this year, for every hive was foodless when supers were removed. I only got 70 lb. of honey from my five hives (spring count), but it is very thick. —TOM SLEIGHT, *Pilsby, Chesterfield.*

APPLIANCE MAKERS AND FOUL BROOD.

[4899.] Yesterday I went to an appliance maker, who shall be nameless, to purchase a feeder. On putting a question, I was told in reply that a frame on a shelf "contained foul brood which had been sent for examination." This frame was not covered in any way, and was almost touching some unwrapped comb-foundation. On my mentioning the risk of infection, the assistant who served me said it could only be carried by the bees themselves; and, taking the comb down, he probed the cells with his pencil (which he uses for marking wood for hive making), and brought out the well-known sticky substance, afterwards wiping the pencil on his apron. Though he said there was no risk, I should think disease could be quickly spread this way. Indeed, there ought not to be two opinions about it, I think, and I will be glad to have yours. I send name and address (not for publication), and sign myself—CARBOLIC, *September* 20.

[We quite agree there should not be two opinions on the culpable carelessness displayed.—EDS.]

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, F.R.M.S., F.Z.S., F.E.S., ETC.

Bulletin de la Société d'Apiculture de Tunisie.—The natives of the mountains in the interior of Tunis keep bees underground. A walk of two or three miles through a magnificent cactus forest led to arid mountains, where the only trees are a few scattered thuyas (*Arbor vitæ*), but where rosemary flourished in quantities. After crossing several ravines, some miserable tents came in view, where live the caretakers of the bees, needful in a country where many of the natives only live by thieving. The hives are placed on the highest parts of the sides of a small ravine, with no attempt at orientation. About fifty rectangular holes are dug in the soil, generally 70 to 80 centimetres long, 40 wide, and 30 to 40 deep, walls and floors being made quite smooth. These holes are covered with pieces of the thuya trees, closely joined, and then with about 2 in. to 3 in. of earth, which is made exactly even with the surrounding soil. The hive entrance is at the top, which, however, does not seem to annoy the bees. On placing a swarm in a hive, a few pieces of bark are fastened inside to compel the bees to build separate combs, and to facilitate the honey harvest. On our expressing a wish to see the working of the hives, the earth was scratched away by one of the boys in charge, who first lighted some dried wood and grass by way of a smoker, then removed some of the pieces of wood at the top of the hive, and showed the bees working on the first comb, well built, and with cells, some open, some covered in, all full of honey.

The native boy seemed quite proof against stings; but he understood his bees, and managed them with tact, so that they remained perfectly quiet and good tempered. In all the

mountainous region of Hamama there are many such apiaries; they appear to answer perfectly, for they are well protected from the heat, and the nature of the soil (tufa) protects them from moisture. It was impossible to get any idea of the yield of such an apiary, as the natives imagine that some unknown impost is threatening them, and will give no information.

L'Apiculteur.—A bee-keeper on the Rhone says his bees have worked profitably in hives made from hollow trees, and many have yielded as much as 60 lb. of honey per hive, and that without comb foundation or any such assistance.

The Same.—Watching a comb where young bees were hatching, I observed one moving its head near a gallery of a wax moth. When she was fully hatched, I saw, to my astonishment, that her wings were partially atrophied. This gave rise to the impression that the wax moth is the cause of this injury.

Queries and Replies.

[2971.] *Utilising Driven Bees and Queens.*—1. I am a subscriber to the BEE JOURNAL, but only a beginner in bee-keeping, and as I want to unite several lots of driven bees to my stocks in order to strengthen them I seek advice as to the best way of uniting. 2. I would also ask: Is there any way of preserving the queens from the driven bees in case I should lose any of the queens from my stocks this winter? I shall have ten spare queens to spare when all my stocks are made right.—B. C. FREASLEY, *Atherstone, September* 16.

REPLY.—1. The safest way of uniting driven bees to stocks in frame-hives is to shake the bees off a few of the combs on to a large flight-board placed temporarily in front of hive-entrance, and as they run in dust them well with flour from a dredger. When the bees from a couple of frames have been thus dealt with, shake a third frame, and as these are floured and running in throw a driven lot of bees among them and let all run in together, dusting them well as they do so. 2. The spare queens can only be preserved by forming nuclei, and carefully preparing these for winter. If you have a "Guide Book" details of this work will be found therein. If not, get one if you wish to succeed in bee-keeping.

[2972.] *Driven Bees Deserting Hives.*—On September 5 I drove seven skeps of bees for a friend, four of which lot I united and put in a new frame-hive, and the other three lots in another, both of which hives were new. On the evening of next day my friend was much surprised to find both hives deserted, the whole of the bees having left their hives, joined forces, and were clustering like an enormous swarm on the branch of tree near by. He cut the branch off and shook the whole of the bees down in front of the hive, into which they ran and now occupy. I advised him to put in all the ten frames, the hive is made to hold in brood-chamber, and, as it is a non-swarming hive made for shallow-frames underneath the body-box, he put these in also in order to hold so big a lot of bees. Will you, therefore, please say in BEE JOURNAL if we have done the proper thing under the circumstances? If not, will you kindly advise what to do; are they likely to winter all right after fed up? 2. What was the probable cause of bees leaving hives and clustering together in one lot? Is not this a very exceptional case?—H. J. P., *Colchester.*

REPLY.—1. The course followed was the simplest and easiest, though not many bee-men would leave seven driven lots of bees to form one stock if two colonies were desired. There should be no difficulty in getting combs built-out and the stock well provisioned for winter if plenty of syrup is given rapidly. So large a lot of driven bees should fill the hive with combs in a very few days if given the chance by rapid-feeding. The lower chamber may be dispensed with when cold weather comes. 2. There is no sure way of accounting for such bee-vagaries as are detailed above.

[2973] *Failure in Queen Introduction.*—I should be much obliged if, with your usual courtesy, you would advise me on the following points:—On the 4th inst. I examined one of my stocks, headed by an old queen, and found the bees only covered five frames and possessed very little brood. I removed the old queen, and next day introduced a young queen in a "Meadows-Raynor" queen-cage, with its lower half filled with sugar. On the evening of the 7th I released the queen, and five days later examined the combs, but failed to find her, but saw four or five queen-cells. This being my first attempt at queen introduction, it has rather disheartened me. Will you kindly answer the following questions? 1. Is the fact of queen-cells being seen conclusive proof that there is no queen in the hive? It may be well to say that I rarely find a queen when looking for one. 2. Is it likely the young queen was starved to death owing to the inappropriateness of the sugar as food? 3. Is the stock worth risking a new queen on, considering its size and the time it has been queenless? 4. Previously to introducing the new queen I had clipped her wings; would the bees be likely to refuse her in consequence?—BUZZ, *Caerleon, September* 16.

REPLY.—1. As a general rule, no, seeing that bees raise queen-cells with a queen at the head of the colony under several and varying

conditions, such as preparing to swarm, deposing old queens, &c. But when cells are started after introducing an alien queen it is a pretty safe sign that the stranger has not been accepted, but killed. 2. Yes; in fact, it is fairly certain that the queen perished from having unsuitable food. 3. We think not; the bees are old, few in number, and not worth saving. 4. "Clipping" the queen alone would not cause the bees to refuse her, though why you cut her wings is not apparent.

[2974.] *Bees Re-queening Themselves.* — I am in doubt as to the proper course to take with one of my hives of bees. It was originally a swarm (not over strong) hived on nine frames on June 23 and placed on stand of the parent stock. About second week in August I noticed drones being turned out of the hive and concluded all was right. Early this month I examined the hive and found a good supply of honey, but the bees were weak in numbers and I could see no eggs or unsealed brood, only a few cells of sealed worker-brood. I noticed three or four empty queen-cells, so concluded the bees had re-queened themselves, but I did not discover her majesty. Two days ago, however, I made another examination, but could find no queen nor any brood save one solitary sealed drone larva, which, on uncapping, proved nearly matured and healthy. I should feel certain that the hive was queenless but for the fact that my other two colonies have also ceased breeding, which fact, I suppose, is due to the very exceptional season experienced. I have reduced the stock in question to six frames and thought to unite the bees to another stock, but decided not to do so without writing to you, as it seems a bit risky in view of the fact that a virgin queen may possibly be in the hive. I should be very glad if you will advise me what to do and also say whether, if the bees raised a new queen, they would eject the drones from the hive before she was successfully mated?—M. W. S., *Upper Halliford, September* 20.

Reply.—The proper way to make certain with regard to queenlessness is to examine the combs for eggs or brood, because if the bees had re-queened themselves, and the young queen was safely mated, eggs or brood would assuredly be found. Judging from details given, it is more than probable that the stock is queenless.

[2975.] *Uniting Suspected Bees—Autumn Feeding.*—I am sending a portion of comb taken from a swarm in skep hived in June last, the parent hive of which swarmed again soon after. There are now not many bees left, so I decided to drive them out, and in doing this I saw no queen, while the enclosed is the only piece of brood to be found. I united the bees with the stock they had originally swarmed from (after flouring both lots well). 1. Have I done right, and if there should be a queen, will she survive in her new quarters? I have noticed no signs of fighting yet among the bees, and as I am not certain if the driven bees had a queen I hope all will be right. 2. Would you also tell me how much honey I must give to two stocks in frame-hives, from which I have removed skeps placed above frames in April? I had a good deal of trouble to get the bees out; in one the combs of ten frames are drawn out, but apparently all the honey had been stored in the skeps in both cases. I have placed feeding-bottles containing dark honey on both hives, and as I have to leave the neighbourhood very soon what instructions must I have as to the weight of honey to be given and how late in the year? Feeding was commenced last night. 3. Would you also say if honey that has been mixed up with pollen and brood is quite harmless as food after being strained through muslin bags?—B. Purvis, *Chelmsford.*

Reply.—Yes, quite right. There was no disease in comb sent, the dead brood being chilled only, not foul. 2. If the stocks in frame-hives are now foodless they will each need 20 lb. to 25 lb. of syrup or honey to carry them through the winter. Autumn feeding should be started at once—indeed, it is now late to begin—and the food given as fast as the bees will carry it down from "rapid-feeders." 3. Yes, quite harmless.

THE HARVEST OF THE HIVE.

By Sir Edwin Arnold.

Now that the last golden sheaf has left, or is leaving, the stubble, there is another les important, but golden, harvest to be reaped—that, namely, of the bees. As September wanes the bee-master prepares to gather from his unpaid labourers in many a cottage garden the results of their summer toil among the blossoms. A report recently issued by the Apiarian Society shows to what an extent honey still figures among our country products. Time was when this yearly looting of the little brown workmen was a much more serious matter for these islands. Before the sugar-cane was domesticated from the wild reed, and the various other sources of sugar had been utilised, it was upon the bee that the community relied for the indispensable saccharine. Out of honey it also brewed its heady beverages of mead and metheglin, and a lump of loaf sugar would have been as great a novelty to Queen Elizabeth as wireless telegraphy is for us to-day. In many countries the wild bee's honeycomb in hollow tree-trunk or rocky cliff is still the sugar-pot of tropical peoples, although they may live amid waving canefields, and one can see how precious was considered that wonderful little waxen store-

house by many a passage in Holy Writ. It refreshed Absalom after fierce battle, as well as giving a famous riddle to Samson. For sugar the world must have, and in the early life of man the honey-bee was one of his best friends.

Even now the amount annually produced and garnered from hives is remarkable in volume and value, as this report plainly shows. A well-kept hive, holding a good breed of workers, and those modern appliances which have made bee-keeping a science, will return to its owner from first to last something over 100 lb. of pure honey, after leaving to the little inmates the margin which they must retain to live through the winter. It is for this tiny margin alone that each petty kingdom labours, and if those gold-banded citizens were left to themselves they would generally cease from effort when as much as this had been safely accumulated. But the bees always begin at the top to build and to fill their combs, and the bee-keeper profits by this custom to keep each hive supplied with empty comb-boxes inserted from above. Thus, time after time, when flowers are thickest and most richly charged with nectar, the marvellous directing spirit which governs every swarm keeps the winged marauders hard at duty. The queen herself, or some other high authority, hums in stern command to the chief officer on duty, "What mean these empty spaces? Turn to and fill them up." Whereupon there are fresh raids made upon the clover, heather, blossoming beans, or what not, and again and again the brave little bands crowd home with fresh supplies until October brings the long vacation of the tribe, and the last swarm has settled down for the winter round their proud and happy sovereign. Then the grateful bee-master makes each hive comfortable for the cold weather, the bees intelligently assisting, and we behold finished for one season more that amazing cycle of patient industry, that astounding picture of loyalty and clear-sighted providence which made Shakespeare pen his splendid lines, declaring that

> They teach
> The arts of order to a peopled kingdom.

Hardly, indeed, is there any marvel in the whole range of nature so profound, so instructive, so full of rebuke for idle and stupid agnosticism as that tiny teacher, the honey-bee. Even the superficial facts of its existence are so astonishing as to have impressed humanity from the very first. But if we go deeper into the miracle of its intelligence, devotion, far-reaching faith, faultless duty, as well as into the mysteries of its physiology, the bee becomes positively inexhaustible as a subject for admiration. Those who know it, as Lord Avebury or M. Maeterlinck know it, can tell us such things about the small being as to render fairyland commonplace. Such mysteries of bee life cannot be entered into here, but I count it among one of the proud memories of my own career that I have had the honour of close personal acquaintance with the bees, ants, wasps, and other insects entertained, educated, and studied by Lord Avebury when he was Sir John Lubbock.

No political county vote ever interested me half so much as that of one summer afternoon, when we took a plébiscite of the bees to learn which of all the flower colours was most attractive to the honey robbers. On the lawn in the Kentish garden were laid squares of paper equal in size but differently tinted, each besmeared with an equal quantity of honey, whilst we sat like election clerks, pencil and paper in hand, each man watching over three stations, and so noted during a specified time the exact number of visits paid to each coloured square during that interval. They knew their own mind, "those wonderful bugs," as an American visitor styled them—they wanted no husting speeches to tell them which tint upon a blossom, which hue, spread over meadow bank or woodland glade or gay country garden, promised the best honey or wax or bees' food—no loitering on the way with those loyal thieves when they had found the right colour and the ready-made wealth. With their thighs packed full of what to them was riches untold, they came and went like bank clerks in the City, who lightly carry millions sterling strapped round them, and not one drop of it was touched nor one minute of labour grudged. I forget just now their exact vote; what flower-colour it was which they triumphantly bore to the head of the poll. Yet, certainly that was no democratic choice which the brown workmen made, to whom no system of government, except the monarchical, could be so much as conceivable. And yet how extraordinary the character is of the dynasties honoured and obeyed in their palaces of twisted straw—alas! what would become of all theories about Divine right among men if, like the bees, we could make a new queen every sixteen days. When the hive is threatened with anarchy by absence of the supplementary rulers or by unroyal neglect of official duties on their part they do not address the Crown, nor proclaim a revolution, nor declare a war, nor loot and devour the honey stored in the six-sided Treasury pots. Simply they build a special cell, shaped like the wicker basket that is used when pool is played at the billiard-table, and thither they conduct her Majesty. There does she enter, "high and composedly" like Queen Elizabeth at Hatfield. In that cell she deposits one of the 2,000 eggs which it is her daily duty to lay, and no microscope can detect the slightest difference between that egg and the others which will turn into workers or drones. But the bees place in her cell certain special foods, and lock up its gates with certain solemn observances, after which, in sixteen days, lo! there is a new queen, who shall lead a swarm or govern in

the old one. So goes her Grace back to her own throne, and there

> Seated in her majesty surveys
> The singing masons kneading roofs of gold,
> The civil citizens storing up the honey,
> The poor mechanic porters crowding in,
> Their heavy burdens at the narrow gate;
> The sad-eyed justice, with his surly hum,
> Delivering o'er to executors pale,
> The lazy, yawning drone.

Daily Telegraph.

Bee Shows to Come.

September 20 to 27, at the Agricultural Hall, London.—Honey Show in connection with the seventh Annual Exhibition and Market of the Grocery and Kindred Trades.

October 4, at Newcastle-on-Tyne.—Annual show of the Northumberland and Durham B.K.A. in the Y.M.C.A. Institute. (The above Show has been cancelled.)

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

C. F. B. (Sark).—*Salicylic Acid Solution.*—1. As given in "Guide Book" (9th Edition), Salicylic Acid, 1 oz.; Soda-Borax, 1 oz.; Water, 4 pints. 2. The recipes given fourteen or fifteen years ago have been superseded by other and better remedies since discovered, hence the change in present (17th) edition.

H. E. N. (Hornsey).—*Braula Cæca in Hives.* There is no doubt as to the identity of the "reddish-brown insect" you have in the hive, and if treated as directed in "Guide Book"—as stated—it will soon disappear. 2. *Queens Ceasing to Lay.*—It is rather early for breeding to cease entirely in September, but if queen is a good one, you may induce her to provide a batch of late reared bees by keeping the hive warmly wrapped and slow and constant feeding for a week or two.

B. B. (Weston-super-Mare).—*Keeping Bees for Profit near London.*—We fear the chances are not great of money being made from bee-keeping at New Eltham, near London. The place is no doubt good enough for bees to keep themselves and yield some surplus for home use in good seasons, but for money making the hives must be located further afield. The district named is, we fear, too rapidly resolving itself into "villadom" for profitable bee-keeping.

WALDY (Essex).—*Foul Brood and Comb Foundation.*—Even if not badly affected, the wax from a diseased stock is not safe to use in foundation-making. Why not melt combs down and use the wax for household purposes?

R. O. (Christchurch).—*American and Colonial Bee Journals.*—It is rather a "tall order" to ask us to print addresses of all the bee papers published in America and the Colonies, there being, we suppose, some dozens of them. If our correspondent will name a few we will give the needed information.

PRUDENTIA (Dumbartonshire).—*Scottish B.K. Associations.*—1. We are not aware of a Bee-keepers' Association for Dumbartonshire. Perhaps some Scotch B.J. reader with local knowledge will kindly name the nearest B.K.A. to that county.

Honey Samples.

S. E. L. E. (Stafford).—No. 1 is a very good honey, for either show-bench or for table use. No. 2 is also good, but does not equal No. 1.

W. C. S. (Wellington, Som.).—Though not very thick, your sample is fairly ripe and of good flavour. The "ripener" will not help much unless the honey is kept at a temperature of about 80 deg. Fahr. There is no trace of heather-honey in sample.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

A. R. M. (Worcester).—No disease in sample of comb.

W. L. (Lancaster).—Comb sent contains only chilled brood.

G. H. W. (Penrhiwceiber).—Comb is not only free from disease, but is not even "pollen-clogged" as supposed. In fact, save for a few cells containing pollen, it is filled with sealed honey only. It would be correct to call it "honey clogged" being full of sealed honey.

S. T. (Chesterfield).—Neither of the two cells in tiny bit of comb sent contains foul brood, but the sample is not at all suitable for judging from with regard to disease.

Editorial, Notices, &c.

BRITISH BEEKEEPERS' ASSOCIATION.

THE DAIRY SHOW AND CONVERSAZIONE.

The advertisement on our front page will serve to remind readers that the Dairy Show opens at the Agricultural Hall on Tuesday next, October 7. We are also authorised to extend to all bee-keepers who purpose visiting the show a cordial invitation to attend the final Conversazione of the B.B.K.A. for the year at 105, Jermyn-street, St. James's, where the Board-room of the R.S.P.C.A. is placed at the disposal of the Council for the evening, the Conversazione beginning at six o'clock on Thursday, the 9th inst. Light refreshments will be provided for visitors, who can reach the place of meeting readily by 'bus from the Agricultural Hall to Piccadilly-circus in about half-an-hour.

It may be of interest also to say that prior to the Conversazione a meeting of representatives of County Bee-keepers' Associations will be held at the same place for the purpose of conferring with the parent body on the best means of furthering the interests, economical working, and general welfare of the various societies, and conducing to the establishment of more intimate relations between the B.B.K.A. and its affiliated Associations.

The conference referred to above will open at four o'clock.

KENT AND SUSSEX B.K.A.

ANNUAL SHOW AT THE CRYSTAL PALACE.

The Kent and Sussex B.K.A., jointly with the Surrey B.K.A., and in conjunction with the Royal Horticultural Society's Fruit Show, held their annual exhibition at the Crystal Palace on September 18, 19, and 20. The joint efforts of the respective hon. secretaries of the two County Associations resulted in one of the largest and finest displays of honey and honey produce, hives, bees, and appliances ever staged in this kingdom, the total entries exceeding 480. Favoured by fine weather, Messrs. W. Herrod and C. T. Overton gave daily frequent lectures and demonstrations in the grounds to large audiences. On the first day of the show 53,000 persons visited the Palace. The quality of the honey staged from Kent and Sussex was of the highest character, and gave no indication of the poorness of the season generally. In fact, all those who supported the show felt that it was one worthy of such an amalgamation and of the Coronation year.

Messrs. F. Brett, A. J. Carter, and Ernest Walker officiated as judges and made the following awards :—

Observatory Hive, with Bees and Queen (in open class).—1st, W. Herrod, Swanley, Kent; 2nd, E. H. Taylor, Welwyn; 3rd, J. Lee & Son, Silver-street, W.C.; h.c., W. Herrod.

MEMBERS' CLASSES.

Twelve 1-lb. Sections. — 1st, W. Herrod; 2nd, A. Hounson, Bosham; 3rd, M. Killner, Billingshurst; h.c., Rev. M. W. B. Osmaston, Goodnestone.

Six 1-lb. Sections.—1st, W. Herrod; 2nd, M. Killner; 3d, H. Dobell, Marden; v.h.c., J. C. Roberts, Maidstone; h.c., E. R. Nash, Smarden.

Twelve 1-lb. Jars Extracted Honey.—1st, W. Herrod; 2nd, E. R. Nash; 3rd, T. Eversbed; v.h.c., Rev. M. W. B. Osmaston; h.c., J. R. Court, Green-street Green, E. D. Till, Eynsford; and c., J. Seabrook.

Six 1-lb. Jars Extracted Honey.—1st, E. R. Nash; 2nd, Fox & Vidler, Rye; 3rd, T. Eversbed; v.h.c., W. Herrod; h.c., M. Killner; c., Rev. M. W. B. Osmaston, H. Dobell, G. C. Lyon, Hastings, and A. T. Walton, Chelsfield.

Three Shallow frames of Comb Honey for Extracting.—1st, E. R. Nash; 2nd, Rev. M. W. B. Osmaston; 3rd, T. Eversbed; v.h.c, F. R. Court; h.c, Miss Carter, Farningham.

Single Shallow-frame Comb Honey for Extracting.—1st, Geo. Wells, Aylesford; 2nd, W. Herrod; 3rd, Miss Carter.

Medals of the K. & S. B.K.A. to the three most meritorious exhibits in above honey classes were awarded respectively, to W. Herrod, E. R. Nash, and M. Killner.

OPEN CLASSES.

Twelve 1-lb. Jars Extracted Honey (light).—1st, E. Lodge, Chelmsford; 2nd, W. Loveday, Harlow; 3rd, H. W. Seymour, Henley-on-Thames; h.c., J. Coates.

Six 1-lb. Jars Extracted Honey (light).—1st, Jas. Lee & Son; 2nd, C. Lodge; 3rd, W. Loveday; v.h.c., A. G. Preen, Nessclife, and G. W. Kirby, Bristol; h.c., W. Barlow, High Wycombe, and H. W. Seymour.

Twelve 1-lb. Sections. — 1st (and Bronze Medal "One and All" Association), H. W. Seymour; 2nd (and certificate ditto), S. Bailey, Itchingfield; 3rd, C. Lodge; v.h.c., W. Loveday; h.c., A. Hounson.

Six 1-lb. Sections.—1st, W. Herrod; 2nd, W. Loveday; 3rd, S. Bailey; v.h.c., F. A. Kent, Dorchester, H. W. Seymour, and W. H. Brown, Shrewsbury.

Twelve 1-lb. Jars Granulated Honey.—1st, C. Lodge; 2nd, Miss Carter; 3rd, H. W. Seymour; h.c., T. Evershed.

Six 1-lb. Jars Granulated Honey.—1st, C. Lodge; 2nd, W. Loveday; 3rd, H. W. Seymour; v.h.c., T. Evershed; h.c., P. H., Moss, Farningham; c., H. W. Howland, Mersham.

Three Shallow Frames Comb Honey for Extracting.—1st, H. W. Seymour; 2nd, G. Wells; 3rd, W. Loveday.

Single Shallow Frame Comb Honey for Extracting.—1st, Geo. Wells; 2nd, J. B. Houle,

Chittlehampton ; 3rd, H. W. Seymour ; 4th, P. H. Moss.

Twelve 1-lb. Jars Extracted Honey (dark).—1st, H. W. Seymour ; 2nd, R. George, Shrewsbury ; 3rd, A. T. Walton ; h.c., G. W. Kirby.

Trophy of Honey and Honey Products.—1st (and B.B.K.A. Silver Medal), H. W. Seymour ; 2nd (and B.B.K.A. Bronze Medal), James Lee & Son ; 3rd (and B.B.K.A. Certificate), W. Loveday ; v.h.c., W. Herrod ; h.c., Mrs. Waller, Bristol.

Beeswax.—1st, A. G. Preen, Nesscliffe ; 2nd, T. Evershed ; 3rd, J. Pearman, Derby ; v.h.c., W. Patchett, Cobourne ; h.c., Jno. Berry ; c., W. Herrod.

Honey Vinegar and Mead.—1st, T. Evershed ; 2nd, W. Loveday ; 3rd, C. Lodge ; h.c., W. H. Brown, Shrewsbury.

Articles of Food Containing Honey.—1st, M. Killner ; 2nd, T. Evershed ; 3rd, H. W. Seymour.

Complete Frame Hive.—1st, E. H. Taylor ; 2nd, C. T. Overton, Crawley, Sussex ; 3rd, J. S. Greenhill, Wimbledon.

Outfit for Beginner in Bee-keeping (price not over 30s.).—1st, E. H. Taylor ; 2nd, C. T. Overton ; 3rd, James Lee & Son.

Collection of Hives and Appliances.—1st, James Lee & Son ; 2nd, E. H. Taylor ; 3rd, C. T. Overton.

Objects of Interest.—Certificates of Merit to Dr. P. Sharp (Lantern Slides), and Mr. Tom Pogmore (Swarming Arrangements).—H. W. Brice, Hon. Sec. K. & S. B.K.A.

SURREY BEE-KEEPERS' ASSOCIATION.

SHOW AT THE CRYSTAL PALACE.

The annual exhibition of the Surrey B.K.A. was held in the large concert hall in the Crystal Palace on September 18, 19, and 20, and notwithstanding the past unfavourable season for bee-keeping, the show was a great success and again a record one, being the largest of the kind held this year, the total entries in the twenty-four classes numbering 286. An interesting and instructive feature of the show was a large collection of photographs of the members' apiaries, &c.

The exhibits were of excellent quality, and in some classes, notably that for granulated honey, were more numerous and much superior to those staged last year. In the class for "dark" honey, some heather honey was staged by mistake, and should have been exhibited in the heather class, where it probably would have appeared to advantage. Cakes and confectionery made with honey were well represented, as was also the class for beeswax, the latter producing more entries than in any previous year, and the quality was very superior. The observatory hives formed a great attraction for the thousands of persons who visited the show. Fine collections of hives and appliances were staged by Messrs. Lee & Son, Silver-street, Holborn ; E. H. Taylor, Welwyn, Herts ; and C. T. Overton, Crawley, Sussex.

The exhibit gaining the model of the Warwick vase was of exceptional merit, showing a number of articles of food, confectionery, sweets, bread, and vinegar in which honey is capable of being used with great advantage, and also showing many other purposes to which wax can be usefully employed.

The judges were Messrs. Ernest Walker, A. J. Carter, and F. Brett, and the following are their awards :—

MEMBERS' CLASSES.

Twelve 1-lb. Sections.—1st, W. Welch, Cranleigh ; 2nd, A. H. Miller, Egham ; 3rd, A. E. Mumford, Redhill.

Six 1-lb. Sections.—1st, J. O. Quinton, Redhill ; 2nd, T. Earl, Crawley ; 3rd, R. Peters, Banstead ; v.h.c., W. Sole, Wimbledon ; h.c., E. C. P. Hull, Redhill ; and A. E. Mumford.

Six 1-lb. Sections Heather Honey.—1st, A. Allen, Elstead ; 2nd, A. Seth-Smith, Cobham ; 3rd, W. E. Hackett, Cobham ; h.c., G. Chandler, Winchfield ; c., E. P. Betts, Camberey.

Three Shallow-Frames Comb Honey for Extracting. — 1st, E. Bontoft, Caterham Valley ; 2nd, A. Seth-Smith ; 3rd, A. Watkin, New Malden.

One Shallow-Frame Comb Honey for Extracting.—1st, A. Seth-Smith ; 2nd, C. R. Corbould, Leatherhead ; 3rd, R. C. Blundell, Horley.

Twelve 1-lb. Jars Extracted Honey (Light).—1st, E. Bontoft ; 2nd, G. Poulter, Leatherhead ; 3rd, H. Dann, Wallington ; v.h.c., R. C. Blundell ; h.c., A. Greenslade, Sutton.

Six 1-lb. Jars Extracted Honey (light).—1st, J. O. Quinton ; 2nd, P. W. Worsfold, Shalford ; 3rd, J. Davis, Cranleigh ; v.h.c., Miss Stone, Ewell ; h.c., G. Poulter ; and J. L. Winborne, Croydon.

Six 1-lb. Jars Heather Honey.—1st, J. Sharland, Haslemere ; 2nd, G. Chandler ; 3rd, W. E. Hackett ; v.h.c., A. Allen.

Six 1-lb Jars Extracted Honey (dark).—1st, A. E. Mumford ; 2nd, E. T. Grove, Ewell ; 3rd, A. Greenslade ; v.h.c., H. Sayers, Chessington ; h.c., T. H. E. Watts-Silvester, Sutton ; c., F. J. Bernau, Redhill ; H. Dann ; and T. H. E. Watts-Silvester.

Six 1-lb. Jars Granulated Honey.—1st, P. W. Worsfold ; 2nd, J. Davis ; 3rd, A. Seth-Smith ; v.h.c., G. Chandler ; h.c., J. Earl, Three Bridges ; c., M. Lamboll, Chiddingfold.

Best and Most Attractive Display of Bee Products exceeding 100 lb.—1st, C. T. Overton, Crawley.

Beeswax.—1st, W. A. Woods, Normandy, Guildford ; 2nd, J. Davis ; v.h.c., A. H. Miller ; h.c., E. Bontoft and H. Sayers.

Articles of Food containing Honey.—1st, F. J. Weise, Anerley ; 2nd, T. Earl ; h.c., A. Seth-Smith.

OPEN CLASSES.

Six 1-lb. Sections.—1st, W. Herrod, Swanley; 2nd, Jas. Lee & Son, Andover; 3rd, J. Bailey, Horsham; v.h.c., R. Brown, Somersham; h.c., H. W. Seymour, Henley-on-Thames, and A. G. Preen, Shrewsbury.

Six 1-lb. Jars Extracted Honey (light).—1st, Jas. Lee & Son; 2nd, R. Brown; 3rd, C. Squire, Morthoe, North Devon; v.h.c., C. Lodge, Chelmsford, and W. Loveday, Harlow; h.c., G. N. Kirby, Bristol; J. Merrells, Thetford; Rev. M. W. B. Osmaston, Goodnestone, Dover; H. W. Seymour; J. B. Houle, Chittlehampton; and J. O. Quinton.

Three Shallow-Frames Comb-Honey.—1st, Rev. M. W. B. Osmaston; 2nd, Jas. Lee & Son; 3rd, G. W. Kirby.

One Shallow-Frame Comb-Honey.—1st, R. C. Blundell; 2nd, G. W. Kirby.

Beeswax.—1st, A. G. Preen; 2nd, C. Pack, Horsham; 3rd, G. Leeding, Sherborne; v h.c., W. Patchett, Cabourne, near Caistor; h.c., C. Squire; c., W. A. Woods.

Interesting and Instructive Exhibit Connected with Bee Culture.—1st, Mrs. Waller, Westbury-on-Trym; 2nd, Jas. Lee & Son.

Observatory Hive, with Bees and Queen.—2nd, Jas. Lee & Son; 3rd, E. H. Taylor, Welwyn, Herts.

Collection of Hives and Appliances.—1st, Jas. Lee & Son; 2nd, E. H. Taylor; 3rd, C. T. Overton.

Complete Frame-Hive for General Use.—1st, E. H. Taylor; 2nd, J. Lee & Son; 3rd, C. T. Overton.

Most Suitable Outfit for Beginner in Bee-keeping.—1st, E. H. Taylor; 2nd, C. T. Overton; 3rd, Jas. Lee & Son.—F. B. WHITE, *Hon. Sec, Surrey B.K.A.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

*** *In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4900.] *Feed! feed! feed!* This should be the watchword of every bee-man at the present time. If it has not yet been attended to, the sooner the duty is performed the better. Not only is there no surplus worth naming at the end of this sunless summer, but a very large percentage of colonies will require less or more feeding to preserve them for another season's work. Let it be remembered that every colony now short of stores is a certain loss, whereas a few pounds of sugar given to each may save them to do excellent work next year. In other words, a shilling spent now may secure one or two pounds in 1903. No time should be lost either, as late feeding does not give the bees a chance of sealing and properly arranging the stores, so that bees go into winter quarters in bad form. A large Canadian feeder containing from 5 to 10 lb. of syrup does the work very expeditiously—and nothing but rapid feeding should be done at this late period. Heather gave way very early this year. Indeed, it was scarcely ever properly in bloom, as chill nights, and dull, cloudy, sunless skies all day stunted its growth and hindered its proper development. Any surplus secured should fetch a handsome price. I never had so many inquiries for honey. Two houses alone would have taken any quantity, and at any reasonable price. But alas! this season is what I have already called it, one of honey famine.

The Government.—Any divergence on the part of the bee-keeper from the laws regulating the character and conduct of bee-life may make of a well-behaved and gently disposed lot of bees a set of raging demons, caring for nothing but revenge, and who sacrifice even their own lives without remorse or hesitation, so long as they think they are doing it for the benefit and advantage of the colony as a whole. This is one of the most distinctive features of bee government, and perhaps one of the finest traits in insect life. The whole regulation, organisation, and management of the hive is purely republican, and the law unhesitatingly sacrifices the individual for the good of the community, and she quietly acquiesces and immolates herself on the altar of duty. The individual in the hive is nothing: the community is everything. From the earliest times the excellent rule and general order have been a theme of praise. Virgil wrote:—

> "Some have taught
> That bees have portions of ethereal thought";

and Shakespeare describes them as

> "Creatures that by a rule of Nature teach
> The art of order to a peopled kingdom."

Viewing the internal organisation of a populous hive in the month of August one realises the truth and force of the proverb, "As busy as a bee." I know no other creature who displays such an overmastering zeal for labour, and none who can carry it on from early morning to darkening eve with such unflagging energy and perseverance. Labour seems to be its sole delight, and at no time does it appear to revel in happiness more than when it is plying its industry with the

utmost tension. What more delightful sight can any bee-man imagine than a strong colony of bees working on the heather in some delightfully bright day of glorious sunshine. What hurry and bustle is displayed by the returning bees as they approach their hives heavily laden with their rich and luscious amber stores! How straight they make for that small entrance, without doubt or hesitation, darting direct as an arrow from the foraging grounds for the one speck, perhaps amongst scores, which is all the world to them, as it bears the magic name of home. How wisely and well they, the guards, and the outgoing bees avoid all semblance of crush or confusion, and how unerringly they go to the right spot in the super or brood nest, with their loads of honey, pollen or propolis, depositing each just where the spirit of the hive teaches them is best. Truly they seem to be, again quoting Virgil,

> "Endued with particles of heavenly fires
> For God the whole created mass inspires."

An Irate Bee.—Has it ever been your good (or bad) fortune to see a bee in a mad fury? What a passionate temper it works itself into, and what thrilling words of wrath and passion the notes of its war song seem to convey to the alarmed beholder! Humour it whichever way you please, it cannot, or will not, be soothed or calmed into restfulness. Move but a muscle and straight it comes at you; shrink but ever so little and some instinct teaches it you are vulnerable. Stand stock still, yet you cannot deceive it into a belief that you are mere matter, and it persists until tired nature has to give way; and even the wink of an eyelid adds fuel to the flame of its ire, for thereby it knows its fury has told. On the other hand, try to fight it, and you, the giant, have to give way to the pigmy. It has a system, too, in its attack, and bides its time until the psychological moment arrives. It seems to take a savage joy in biding its time, and seldom makes direct for its victim in a bee-line, but gyrates and circles in ever contracting spirals. Now it flies round and round the subject of its wrath in wonderful evolutions, and, with intense suddenness, it appears from the most unexpected quarters. Darts fierce and quick, lightning-like in their speed, and awe-inspiring in their determination, follow from all points of the compass. Meteoric evolutions, concentrating and gathering force and virulence from the delay, tell on the firmest nerves. The amount of passionate vehemence and venomous passion it imparts to its fiery buzz convey an infinity of spiteful wrath, and its notes ring the changes on wild anger. Stormy rage, passionate hate, savage animus, malignant exasperation, and vehement fury, till, at last wrought up to the highest pitch of passion, with one savage dart, fierce, quick, and determined, it buries its poisonous weapon in the most vulnerable part of its victim.—D. M. M., *Banff.*

FOUL BROOD AND APPLIANCE MAKERS.

[4901.] Some years ago I had my apiary of about £50 worth of bees and hives totally ruined by foul brood and, knowing the exceedingly infectious nature of the disease, I am extremely anxious to keep free from it in future; therefore, in the interest of myself and also of British bee-keepers' in general, I should be glad if "Carbolic," who writes in B.B.J., September 25, would, at least, state the name of the county in which he witnessed the appliance maker's employee tampering in such a foolhardy manner with foul-broody comb in close proximity to "foundation," &c. I have proved foul brood to start afresh in a bar-frame hive (that was well dusted with carbolic powder when put away) after eleven years! I think, in the interest of those who make foundation and those also who buy, that, at least, so much information ought to be given. I am desirous of purchasing several pounds' worth of foundation before another spring, but if I knew who the person was that probes foul-broody combs with a workman's pencil and then neatly rubs it on his workman's apron, I would not have any appliance from that firm at a gift. As it now stands, the question seems to resolve into:—Shall we buy foundation and risk infection, or go without, and be safe and suffer inconvenience and loss in next year's honey crop by so doing?—"ALVEI B." *eptember* 27.

HONEY AT THE "GROCERIES."

A BEE-KEEPERS' IMPRESSIONS THEREON.

[4902.] May I trouble you with a few of my impressions of the honey show at the "Groceries" Exhibition held last week at the Agricultural Hall?

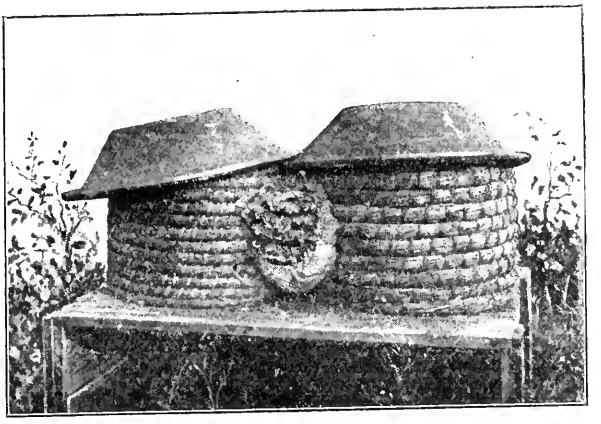
In the first place, I think it was a magnificent show of bee-produce, both in quality and quantity. Second, something was wanting, according to my mind, in order to make it as attractive as it should be; the selling classes, for instance, should have had prices attached in a way that would invite buyers' attention. Thirdly, absurd prices were asked (I was given to understand 9d. per lb. was asked for honey in bulk), which will tend to defeat the object for which the class was instituted, viz., to establish a honey market between producers and buyers. I also think the display could be made more attractive by bracketing the classes distinctly and plainly, so that the uninitiated could understand something of the differences in the various honies staged, as "light class," "medium class," "dark class," "heather sections," "free from heather," "selling class," &c.

Then, I think, selling classes should have attached to them name and address of the exhibitor and price asked, and he should not expect fancy prices from wholesale buyers.—H. DEVEREUX, *Shillington, September* 29.

A BEE-HIVE CURIOSITY.

[4903.] I send you a curiosity, in shape of a photograph of a wasps' nest attached to the rear sides of two straw skeps, which I thought might interest B.B J. readers. I came across it recently when preparing to drive the two skeps shown, which latter were covered with some old sacking. In removing this the side of wasps' nest was torn away, thus giving a sectional view of the nest, showing its characteristic formation of horizontal combs, the cells facing downward. Some of the cells can be clearly seen to have rough edges, showing that the perfect wasps have emerged; others are rounded off at bottom, evidence that the insects have not got through. The nest is situated at back of skeps, it being doubtful whether the bees would have permitted their presence in front.

I have often come across small wasps' nests in disused hives, but never one attached to hives, or so large as this. Hoping it may be of interest to you and your readers.—H. J. Banks, *1st Class Expert, B.B.K.A., Wragby, Lincs.*



A CURIOUS COMBINATION—BEES AND WASPS.

BEE-DRIVING EXPERIENCES.

BY AN AMATEUR.

[4904.] There are items of one's bee-keeping that remain as "permanent remembrances." Hiving the first swarm, the first sting, &c., are amongst these, and in my own case removal from a district of frame-hives to one in which skeps were the rule, and bar-frames the exception, brought about a new experience that may possess interest for readers, so I send it on for what it is worth. One of my frame-hives was set up in April in a conspicuous position, and soon inquiries for help were pretty numerous from old skeppists of both sexes. Later on I undertook to drive a few condemned skeps, taking the bees for the trouble, and thereby hangs a tale. Without having done any "driving," I had seen the operation performed at a show, and armed with this knowledge and a smoker, I set out for an old widow's bees. After a puff or two of smoke at the skep entrance, I removed a tin wash-basin and sundry pieces of old sack, then lifted the skep, and dropped it over a cloth, and carried it to a shady spot, and set it on a garden seat. There was no bucket handy, but by rolling up a coat and bedding the hive upon it, I managed to steady the skep for driving. A few bees were beginning to be troublesome. After a few puffs of smoke the driving skep was attached, and the game began. The queen was a young one, and the bees ran up into the top skep rapidly. At last, after less than fifteen minutes, nearly all bees were out, though I did not see the queen go up. The top skep was then taken off, and the bees tied down, and my first driving experience was successfully ended. The old skep yielded over a stone of dark-coloured honey. The bees (a strong lot) were safely hived on full sheets of foundation.

The second operation was also easily got through. The skep, being a flat-topped one, answered beautifully. The third skep was rather more difficult to manage, for although a flat-topped one, it had a small straw super fastened on the top with thick string. However, after cutting the string and puffing in plenty of smoke, I forced off the super and clapped a handy brick over the central hole of lower skep, and carried the upper one to a shady place for driving. This was a job, the super being about half as large as the skep into which the bees were to be driven. However, the job was done, and the bees safely secured and covered up. Being queenless, they were running all over the hive, buzzing away like an engine. The stock was then safely driven into another skep, and, as I had a long walk before me and night coming on, the two lots were carried home separately, and with the aid of a flour-dredger the two portions were united to the bees from the first-named skep. One queen was cast out during the day, and the united bees settled down very nicely.

Then came expedition No. 3. In this case the skep was a round-topped one, and was placed mouth upwards in a bucket, and then my first real trouble began. A hole had somehow been made in the top of the skep, and when the "patting" commenced a few bees came out that way to "investigate."

One got in the way of my left hand, and I got my first sting! But disasters never come singly. No sooner had a good lot of bees got into the top skep than the wire skewer bent, and the skep, by twisting round, caused a number of bees to drop on to the table. A lot took wing, and mischief seemed imminent, as the smoker (bless it) had gone out! and my matches were lost. Luckily, a carbolic cloth was handy, and, popping this over the skep, I had a fresh box thrown to me, and after the smoker was well alight, I "went" for the skep, but the bees were settling down as quietly as if this was the usual order of things. Eventually I finished my task as odd bees were running about crying "lost," and I did not want to crush any more.

I was rather troubled until on placing the stock skep on a garden-seat with arms, luckily close at hand, I propped the driving skep in the angle between the arm and the back. After some little time "driving," the bees (evidently with the queen) had run up. In order to gather up the stragglers, the driving skep was placed on the old stand, and the bees found their way home. This lot of bees were also housed in a new hive on full sheets of foundation. Thus ended expedition No. 3. Two important lessons had been learned; first, that skeps are best moved when the mouth is covered with a mild carbolic cloth; and second, that the less smoke used the quicker is the driving completed. Thus experience teaches wisdom.

Expedition No. 4 yielded more experience. A late swarm had been hived in the skep, and as they were very light I was asked to "take" them. My skill as a bee-driver was now becoming noised abroad, and on starting out I was followed by a few people who wished to see me at work. They little suspected what an amateur I was at the job. However, I did not give myself away by appearing nervous. On reaching the hive I puffed in a *little* smoke, lifted it, and in dropping it over the carbolic cloth noticed that the skep was only half full of comb. I therefore carefully and very deliberately went through my task, as I was being watched (from a safe distance) by onlookers. The operation took longer than I expected, as the bees had such a long "mount" from the combs to the driving-skep, but for the first time I saw a queen ascend, though she escaped me when trying to catch her. When all was over a young farmer asked me to look at his two hives, and see if I could help him. I consented, and this leads on to expedition No. 5.

I found that one stock was in a Tate's cube-sugar box, which had held 1 cwt. of sugar. The other was a soap box. I did not feel equal to the task before me, and therefore wrote to you, Mr. Editor, for advice. This you kindly gave on page 310 of B.J. for July 31 last. The part of your reply referring to "experience" being needed warned me to be careful. Please accept my best thanks for your reply. One Saturday afternoon I set out, and on arrival at my destination I agreed to "defer operations till 'master' returned from market, as he would like to see me at work again." On commencing, I flattened out one side of my driving-skep, and placed it handy; then carried the smaller of the two boxes into an old arbour. My luck had not forsaken me. The combs ran from end to end, and when the flattened side of skep was placed in position it just fitted, and a convenient nail hole received the driving-skewer. A couple of holes, rapidly made with a big gimlet, received the driving irons. On this occasion the carbolic cloth subdued the bees so well that the smoker was not used at all; indeed, the bees were so quiet that I dispensed with hat and veil for the first time. I again missed the queen, but ran the bees into a new hive on the old stand. I did not get the driven bees this time, as the owner became enthusiastic, and anxious to keep them. However, he came over a few days later with a good share of the honey as payment for my trouble.

The following Saturday I again visited the same place on expedition the sixth. This time master was at home, and so I tackled the Tate's sugar-box. During the previous year (1901) the sun had made things warm for the bees in this box, and some combs consequently had dropped down on to the stand. The box was also bulky and very heavy, but after a struggle I managed to turn it over and cover with my carbolic cloth. It was quite three-fourths full of comb, but owing to the break-down mentioned the combs were irregularly built, and some broke down while we carried it to the arbour. I say *we* carried, for it was too heavy for one. The queen must have been old and worn out, for the swarm was set up in 1901, and no swarm had issued this year. After fixing my driving skep as well as I could I commenced patting. I had got at least 3 lb. of bees out when the remainder obstinately refused to leave the box. I smoked them, and tried to get the combs out, but it was no good, so after working over an hour, and as darkness was coming on, I determined to sulphur the remainder. I united the bees (using the flour dredger) to the lot I had previously set up, and the sulphuring job completed my task. There was at the very least four stones of honey in the box. Some of it was in new comb and of a beautiful light colour and flavour, but two-thirds was in old comb, and consequently dark coloured. It was good honey, nevertheless. The driven bees were fed with best cane sugar, and are all doing well.

My next and final experience was the worst of the lot; when an old (neglected) frame-hive in a neighbouring village received my attention. The bees had worked their way into the roof and fastened it down. I blocked up the entrance with a carbolic cloth, only to find that the roof fitted badly and the bees,

had a back-door. This I blocked up, and then proceeded to deport the hive. After boring a hole in the roof with a centre-bit, I smoked the bees and forcibly pulled off the roof. The first bees I saw were drones and, as it was September 3, I guessed they were queenless. After tearing away the quilts the combs were seen to be of all shapes, sizes, and conditions, and the frames so fixed as to be immovable. All this work had taken time, and evening was fast approaching, so I drove all the bees I could, and then smoked the rest out. When we broke out the combs there was in them a good lot of honey and pollen, but not a scrap of brood. This, of course, convinced me that the bees were queenless. I joined them up (using the flour dredger) to a little lot which I had started, and then thought that I had done. But your reply to a query last week regarding joining queenless bees to bees with a queen troubled me, as I had not taken the precaution to cage the queen. Indeed, I did not know that she was in danger, or I should have caged her for a day or two. I shall have a look soon to see how they are going on.

I have a few more "driving jobs" on hand when the weather improves. It has been a somewhat exciting but extremely interesting experience to me. My advice and help, I am glad to say, have been the means of helping to convert three skeppists to frame-hive bee-keepers, so others have benefited as well as myself; and I hope that if this appears in the B.B.J. it will encourage others to try their hands at the work. Helping others has been the means of teaching me a good deal about the craft, and next year I hope to sign myself a certificated expert.—A. R. HESELWOOD, *September* 13.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, D.SC., F.R.M.S., F.Z.S., F.E.S., ETC.

L'Apiculteur.—Last year, in looking over a bed of tulips, I was surprised to see many dead bees in the flowers, and others struggling vainly to get out of the blossoms they had visited.

L'Apicoltore.—The wood-bee (*Apis Selvatica*) of Central America is a little larger than a house-fly and about half the size of our ordinary bee. These bees are brown, with golden rays on the abdomen, and have the appearance of having the legs too short; they build in hollow trees. If an attempt is made to take the nest they become furious, and fly into one's mouth and ears, and even get under the clothes, of the enemy, rendering the work almost impossible.

Their nests are always divided into two parts, one for the brood and one for the reserve of honey. The upper part of the nest is full of this reserve, and here we see the originality of their habits. Instead of placing the honey in combs, it is filled into capsules of wax almost the size of a peanut and very much the same shape. The partitions of these cells are of the thickness of paper. If the nest is opened carefully the cells have the appearance of a cluster of nuts, some cream colour and some brown. The bees do not fill the interstices with honey, but use them as passages. The honey is never of lighter colour than molasses, and the taste is somewhat rancid, as if mixed with pollen. The natives do not seem to care for the honey, but they take the combs with the brood, and chew it up as a boy would eat a nice slice of bread and marmalade.

Leipziger Bienenzeitung.—As a remedy for bee or wasp stings in the throat or mouth is given the following:—Take a teaspoonful of salt, slightly moistened with water, and swallowed slowly; the pain and swelling disappear in a very short time. This simple means has saved many lives.

Elsass Lothringischer Bienenzüchter.—Does it injure bees to feed them on honey which is more or less fermented?

There are two kinds of fermentation in honey—"vinous and acid"; the former does not spoil the honey so as to injure the bees, which, indeed, eat it eagerly. Hanoverian apiculturists maintain that their heather honey which has passed through vinous fermentation is an excellent nourishment for the bees, as promoting the extension of the brood-nests.

Honey become acid has the taste of vinegar. This is not suitable food for bees, and, indeed, it is easy to see that they turn from it with dislike. Any bees which have eaten it become swollen and succumb to severe sufferings. Acid honey, however, is not lost, as it makes a wholesome and excellent vinegar for domestic purposes.

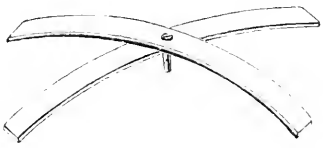
Queries and Replies.

[2976.] *Making Winter Passages.*—I should be pleased to have information regarding the above. I saw simple plan mentioned in the B.B. JOURNAL of placing sticks underneath the quilt, instead of cutting passage-ways through the combs, but I did not quite see how it could be done without the bees escaping round the edges of the quilt after being raised up by the stick. Is there any other good plan?—IGNORANCE, *Milnthorpe, September* 27.

P.S.—Some time ago I wrote you asking for advice on driven bees. I find that they have full frames of comb, and to all appearance doing well. Thanks for your kind reply.

REPLY.—The best and simplest device we know of is that which serves for giving candy-

food to bees in winter. It consists, as shown in sketch, of two curved pieces of wood cut from an American cheese-box, crossed and united by an inch or inch and a half screw, the thread of which protrudes into the curvature. Laying this, not as shown in cut, but legs upwards, in a saucer, with a sheet of paper underneath, we pour the melted sugar in until about an inch of each leg is left exposed. The device need not touch the bottom of the plate; if it dips under the surface a half-inch it will do, and for this purpose a piece of cardboard laid across the four legs will sufficiently overcome the buoyancy of the wood until the candy sets. Thus, when the



candy is placed over the frames, the four legs protruding slantingly 1 in. long give bee-space at once under its whole area. Moreover, the candy is held by the wood and projecting screw-thread from sinking down on to the bees as they undermine it; and when completely eaten away the device still stands to support the quilt, leaving about 1 in. passage-way over the frames. The device spans five seams of half an inch, and it does not require the exercise of high mathematics to see that, given frames of *nearly an inch*, and interspaces of *half an inch*, the four legs of the device (which, by-the-by, should be opened to about 3 in. wide) will always find a footing.

[2977.] *Autumn Feeding.*—One of my stocks is very short of winter supplies, and it is now too late to feed with syrup; but I have a quantity of honey unfit for the table, owing to honey-dew, &c., which could be used for feeding. Now, what I am desirous of ascertaining is, would it be safe to feed the bees up with this honey if warmed and the bees packed up and encouraged to take the food? I could, of course, place the sections in a rack over the brood-chamber, but would they take it down now that the weather has turned so cold?—ANXIOUS ONE, *Cornwall, September* 27.

REPLY.—The honey referred to may be used with perfect safety as bee-food.

[2978.] *Bee Parasites.*—While examining one of my colonies of bees the other day I discovered on the queen three red insects, each about the size of an ordinary pin's head. I failed to find any on the worker-bees. The queen is a 1902 one, only recently introduced into the hive, but I found the same kind of insect on the old queen. I have two other hives close by this one, but I have not seen the insects in them. Will you kindly tell me—1. What they are? 2. Do they attack queen only? 3. Do they injure the queen in any way? 4. By what means could I get rid of them? I send name, &c, and sign myself—CHEQUERS, *Glos., September* 24.

REPLY.—1. The insect referred to is, no doubt, the parasite known as *Braula coeca*, or blind louse. 2. It is seen on worker-bees in hives where the parasites are numerous, but seems to show a decided preference for the queen; workers, when troubled at all, seldom carry more than two of the *braulas*, but a queen occasionally has at times half a dozen of them at a time. 3. They worry and annoy queens very much. 4. Tobacco smoke will cause them to drop on to the floorboard, where they should be swept off on to the ground.

[2979.] *Clarifying Beeswax.*—I have been a subscriber to the B.B.J. for some time, but not having seen described in it any way of clarifying beeswax after it is melted, I ask you to kindly assist me? I have seen sulphuric acid mentioned, but do not know the manner of using, neither the proportions. Your reply will oblige.—J. P. C. E., *Sussex.*

REPLY.—1. As a rule, we do not care to advise the use of chemicals in clarifying beeswax, preferring the ordinary method of cleansing as far as possible by running the melted wax into clean water, and scraping the discoloured portion that gathers on the under-side of the cake when cold. For those who prefer the method referred to in above query we insert the following method of refining wax and improving its colour from a former issue of our JOURNAL:—Take ½ oz. of the best roll annotto, cut it into thin pieces, and put it in a clean copper or enamelled vessel with a pint of water, and boil it until it is perfectly dissolved; then add 14 lb. of melted wax and continue the boiling until the wax has taken up the colour and the greater portion of the water has evaporated, then, withdrawing the heat, carefully sprinkle over its whole surface about half a fluid ounce of sulphuric acid; attention must be paid or it will froth up and boil over. The melted wax should now be covered and left for some hours to settle and cool slowly, care being taken not to disturb the sediment. All impurities will be at the bottom of the cake and should be scraped off.

[2980.] *Bees Fighting Among Themselves.*—Some days ago I received a stock of Italian bees, and put them in a clean hive with combs and brood from another colony. The bees are fighting among themselves; they were doing so before I put them in the hive. What is the cause of that, and how can it be prevented?—F. PROCURATOR, *Devon, September* 29.

REPLY.—We must have more details before attempting to explain the cause of bees fighting among themselves. They are known to do this on very rare occasions when food and brood from another stock is given to them, but not otherwise.

Echoes from the Hives.

Four Elms, Edenbridge, Kent, September 29.—I have now been able to "line up" all my finished sections and jars of extracted honey as prepared for marketing. I find my crop from eleven hives averages 30 lb. per hive. For such a season as we have had I consider this an excellent crop. In fact, I have never had a better! Bee-keepers more fortunately situated than myself would probably grumble at such a small harvest in a good season. I am, however, thankful to get so much in the best of seasons. My good fortune in securing such a crop is no doubt due to the gentle feeding of all stocks during the trying spring experience this year. All my colonies were strong in bees at that time but very short of food, with one or two exceptions. According to report this seemed to be the ruling condition of hives in this district. When the short period of good bee-weather came (not more than a fortnight's duration) the bees were ready and hence the crop. I may say that there is also a "balancing" feature which may explain my satisfaction over such a comparatively small harvest, and that is I find little or no difficulty in disposing of it at 1s. per lb. to private customers.—W. H. C.

A NEW DEPARTURE

IN TECHNICAL EDUCATION.

By the permission of the Governors of the People's Palace, Miss Hall, the curator of the Stepney Borough Museum, on Tuesday commenced a series of demonstrations with an observatory hive and a number of specimens and preparations on the "Honey Bee and its Allies." These will be repeated daily till Friday, October 3. Invitations have been issued by the Museum Committee to the head teachers of schools in the neighbourhood inviting them to send their classes in charge of one of their staff. This plan has a double advantage: discipline is maintained by the presence of the teacher, who has an opportunity of profiting by the lesson given by one well acquainted with the particular subject and with the best means of imparting information and awakening interest in the minds of the pupils. These demonstrations promise to be very successful. Arrangements have already been made for more than sixty schools to send their children, and yesterday morning over 200, with several teachers, were present, and the total attendance must have been something over 500. It has been found necessary for the lecturer to have some help. Miss Hall has therefore availed herself of the services of the assistant in the Museum, who, while she is demonstrating the life-history and work of the bee, describes to another section various allied species, food plants, methods of taking honey, and the nests of the common wasp, the leaf-cutter bee, and some other forms. An observatory hive for teaching purposes is a modification of the bar-frame hive invented in the United States about half a century ago. It may be described as a frame about 3 ft. square, in which are placed brood-combs and honeycombs. The back and front are of glass, so that the bees may be seen at work, and the frame revolves, so that both sides may be brought under the observation of the class. The foot is hollow, communicating with the inside of the frame, and with the open air, in order to allow the workers an opportunity of gathering nectar or pollen according to the season of the year. To allow the children to obtain some idea of the proboscis, or tongue, and the method of feeding, a few bees had been confined in a circular, excavated cell, covered with glass, under which a little syrup had been run. Without a microscope it was not possible to show how the nectar is swept up into the mouth by the successive whorls of hairs; but still the children could see enough to give them a fair general notion of the bee's action when the insect is busy in the open cup of a flower. Miss Hall first gave a clear description of an insect in familiar language, sedulously avoiding the use of technical terms, and the children were asked to verify this description from the living bees. The characteristics of the queen bee, the males or drones, and the workers or neuters—the three classes generally found in a hive—were set forth; but here only the first and the last could be demonstrated, for the drones had been eliminated. This is easily effected where artificial foundation for the brood comb is supplied to the bees, by making the base of the cells of such a size that the comb will contain only worker-brood. The advantage of supplying artificial foundations for comb to the bees will be at once recognised when one remembers that rather less than 1 lb. of wax is secreted by these insects from every 12 lb. of honey. Honey is deposited in foundation fitted in boxes made to contain about 1 lb. of honey, that being found a convenient quantity to market. These boxes, which are generally adopted by bee-keepers, can easily be removed when full, and empty ones substituted. At another table were shown preserved specimens of many of the British wild bees, the common wasp, and the hornet, the largest British species of the group, natural wax, and various kinds of cells, in which eggs and honey and pollen are stored. These were described by Miss Hall's assistant, who did his work in a very creditable manner. Great interest has been taken in these demonstrations by many bee-keepers, and one influential member of an Association in the Home Counties brought yesterday, as a present, a live wasps' nest, carefully swathed in muslin. This gentleman stated that at a recent show the fertilisation

of queen wasps, about the manner and time of which some doubt had existed, had been observed. The observers were, however, somewhat surprised to find that the process had already been watched and described by Réaumur. Those who are interested in the subject will find the French naturalist's account in the sixth volume of the "Memoires pour Servir" (page 200).—*Standard, September 25.*

PRESS CUTTING.

QUEENS TEN A SHILLING.

With the idea of ridding the neighbourhood of a nuisance caused by wasps, Mr. F. B. Eastwood, a local resident, offered to give 5s. to people of Clandon and East and West Horsley, Surrey, for every fifty queen wasps brought to him.

Up to the present Mr. Eastwood has paid £3 15s., 759 queen wasps having been captured. One man captured as many as 226.—*Star.*

According to the Paris correspondent of the *Standard*, some of the clerical partisans in France have invented a new method of warfare:—"A certain portion of the inhabitants of Saint Méen refuse to listen to counsels of moderation. Hives full of bees will, they declare, be placed on the barricades in such a position as to insure the insects stinging the horses when the hives are upset by the cavalry." Those who provoke religious strife are often said to stir up a hornet's nest, but it is hard that the gentle and mystic bee, as M. Maeterlinck has taught us to regard him, should be enlisted in this service. We wonder, by the way, if the employment of stinging insects is countenanced by the usages of war as defined at the Hague Conference.—*Westminster Gazette.*

Bee Shows to Come.

October 7 to 10, at the Agricultural Hall, London.—Show of Honey and Bee-produce in connection with the British Dairy Farmers' Association. Numerous and liberal prizes for honey, &c.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

T. WHITELAW (Crawley).—*Doolittle's Book on Queen rearing.*—The only dealer we know of who stocks this book is Mr. Geo. Rose, Great Charlotte-street, Liverpool. He may also keep Professor Cook's work on bees.

F. G. B. (High Blantyre).—*Black Shiny Bees.*—The bees sent are black and shiny because the pubesence or hairiness has been rubbed off the thorax and abdomen through fighting and "robbing." It is an unmistakable sign of severe fighting when bees are seen cast out of hives in that condition.

P. ROBINSON (Hayes Common).—*Foul Brood Preventives.*—If you will give us the date and page of B.B.J. in which the statement you refer to appears, we will be very pleased to reply as requested. Without it we can say nothing.

A. W. (Surrey).—*Bee Parasites.*—See reply to "Chequers," page 398.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

J. EDWARDS (Callington).—No disease in comb.

MEIRIONIWR (Dolgelly).—Foul-brood is just developing in comb sent.

DISAPPOINTED (Tavistock).—The sample sent shows a very pronounced case of foul-brood. As you have the "Guide Book," we need only advise dealing with it in the way recommended therein.

J. M. B. (Cornwall).—1. We find very slight traces of incipient foul-brood in comb, but the sealed cells in sample contain only chilled brood. 2. All stocks short of food in brood-chamber at this season must be fed up to required weight of stores (not under 20 lb.) without delay, and all food should be medicated—as directed in "Guide Book"—in your case. 3. The dark specks in debris sent are the excreta of some insect. 4 Naphthol beta will dissolve if dealt with according to directions on wrapper. We cannot recall having received the photo named, but will be glad to see one of your apiary.

R. W. (Glasgow).—Bad case of foul brood.

Honey Samples.

F. PROCURATOR (Devon).—1. Honey sent is of good flavour, showing a slight admixture of heather, but it is granulating rapidly. No. 1 candy is good; No. 2 being rather too hard or not "buttery" enough in grain.

ERRATA.—In our report of the Warwickshire B.K.A. Show on page 372 of B.B.J. for September 18—last paragraph but one—the awards printed for "Collection of Appliances" should have been for "Beeswax."

For *Collection of Appliances* the awards were:—1st, Geo. Franklin, Burton Green, Kenilworth; 2nd, E. H. Taylor, Welwyn, Herts.

Editorial, Notices, &c.

THE B.B.K.A. CONVERSAZIONE.

In expressing our wish for a good attendance at the final conversazione, which will be held to-night at the rooms of the R.S.P.C.A., 105, Jermyn-street, St. James', we may remind readers—especially visitors to the Dairy Show and those residing near town—that the proceedings commence at 6 p.m., and the journey by 'bus from the Agricultural Hall occupies about thirty-five minutes.

It will also be of some interest to say that the illuminated address for presentation to Mr. J. M. Hooker by his bee-keeping friends in this country will be on view during the conversazione.

MARRIAGE OF MR. F. W. L. SLADEN.

October 2, at Pettigo Church, Frederick W. L. Sladen, eldest son of Colonel and Lady Sarah Sladen, Ripple Court, Kent, to Violet, fourth daughter of Captain Barton, D.L., The Waterfoot, co. Fermanagh.

The numerous friends of our esteemed contributor, Mr. Sladen, who are readers of this JOURNAL will join us in offering our cordial congratulations on his marriage, with best wishes for a long and happy life for Mrs. Sladen and himself.

THE DAIRY SHOW.

The twenty-seventh annual show of the British Dairy Farmers' Association opened at the Agricultural Hall, London, on Tuesday, the 7th inst., and continues till Friday next, the 10th. We have just time to publish the awards this week, while reserving any comments it may be necessary to make till our next issue.

Messrs. W. Broughton Carr, London, and C. N. White, St. Neots, Hunts, were appointed judges, and made the following

AWARDS.

Twelve 1-*lb. Jars Extracted Honey* (*Light Coloured*).—1st, Jas. Lee & Son, Silver-street, Holborn, W.C., and Monks Acre Apiary, Andover, Hants; 2nd, John Smart, Andover; 3rd, T. S. Holdsworth, Kirton Lindsey, Lincs; 4th, Richard Brown, Somersham, Hunts; v.h.c. and reserve No., W. Woodley, Beedon, Newbury; v.h.c., H. W. Seymour, Henley-on-Thames; h.c., E. C. R. White, Newton Toney, Salisbury, and John Carver, Wellington, Salop; c., T. Eversheed, Billingshurst, Sussex.

Twelve 1-*lb. Jars Extracted Honey* (*Medium Coloured*).—1st, Richard Brown; 2nd, Jas. Lee & Son; 3rd, H. W. Seymour; 4th, E. R. Nash, Smarden, Kent; v.h.c. and reserve No., P. B. Govett, Tideford, St. Germans, Cornwall; v.h.c., H. M. Turner, Oxford; h.c., E. C. White.

Twelve 1-*lb. Jars Extracted Honey* (*Dark Coloured*).—1st, H. W. Seymour; 2nd, E. C. R. White; reserve No., W. Sproston, Gt. Haywood, Staffs.

Twelve 1-*lb. Jars Extracted Heather Honey.*—1st, Thos. Richards, Church Gresley, Staffs; 2nd, John Berry, Llanrwst, N. Wales; v.h.c., W. Sproston and Jas. Lee & Son; h.c., J. M. Balmbra, Alnwick.

Twelve 1-*lb. Jars Granulated Honey.*—1st, Richard Brown; 2nd, J. Hookway, Wellington, Som.; 3rd, W. Woodley.

Twelve 1-*lb. Sections*—1st, H. W. Seymour; 2nd, A. W. Weatherhogg, Willoughton, Lincs; 3rd, W. Woodley; v.h.c. and reserve No., Richard Brown.

Twelve 1-*lb. Sections, other than* 4¼ *in. by* 4¼ *in.*—1st, H. W. Seymour; reserve No., Rev. R. M. Lamb, Burton Pidsea, Hull.

Twelve 1-*lb. Sections Heather Honey.*—1st, Jas. Waddell, Wooler, Northumberland; 2nd, J. M. Balmbra; reserve No., Jas. Lee & Son.

Display of Comb and Extracted Honey.—1st, Jas. Lee & Son; 2nd, H. W. Seymour; v.h.c. and reserve No., W. Woodley.

Beeswax, Judged for Quality of Wax only.—1st, Jno. Berry; 2nd, H. W. Seymour; v.h.c. and reserve No., E. C. R. White.

Beeswax in Marketable Cakes Suitable for Retail Trade.—1st, Jas. Lee & Son; 2nd, Jno. Berry; 3rd, H. W. Seymour; v.h.c and reserve No., J. Pearman, Pennylong-lane, Derby; h.c., E. H. Taylor, Welwyn, Herts.

Interesting and Instructive Exhibits of a Practical Nature.—1st, Miss K. M. Hall, Curator, Stepney Borough Museum, London; 2nd, Dr. Percy Sharp, Brant Broughton; v.h.c. and reserve No., H. W. Seymour; v.h.c., W. Woodley.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4905.] Once again we have practically completed our out-of-doors work in the apiary for the season, and we now have time to review our season's work, to take note of the failures and successes of our "fads" or trials of new methods of doing the old-time work. If the successes outnumber our failures we shall feel that we are progressing—that we have discovered "short cuts" where erstwhile we had to go the whole length to accomplish

the same amount of work. The season now drawing to a close has been a chequered one to most bee-keepers. The honey producer has had only a partial crop; the queen-breeder has had considerable work and care without a proportionate fulfilment of his hopes and plans. Young queens have not mated so satisfactorily as in most years, and some have altogether failed to mate, especially those bred late in July and early in August, so that we have had two restricted outputs. Indeed, swarming was the only part of the summer's work which has gone off with a *vim*, and where increase was not required or a market found for swarms this acted against the bee-keeper's best hopes and wishes.

The present outlook is none too rosy, as in many instances the bees are badly supplied with stores, and, where feeding has not already been attended to, the winter will tell a sorry tale before another spring comes round. Therefore I would urge those who have procrastinated with their bee-work to give a few pounds of thick, warm syrup and a good-sized cake of candy when packing down for the winter.

Extracting Sections.—The mention made some time ago has brought me several letters of advice, for which I tender thanks. One gentleman says, "Turn your extractor very slowly," &c. When I do this the honey in some of the partly-filled sections will not leave the comb, and when I get the extractor going at extracting "pace" the combs break away, unless I have my perforated pieces of zinc to take the weight of honey or the force of the centrifugal motion. But if our removable cages had the wire sides made with the projections (say 3½ in. square) projecting half an inch or so to take the bearings of six sections in each cage, the work would go off expeditiously and satisfactorily when extracting twelve sections at one time.

Vagaries of Queens.—This matter has called forth replies in the JOURNAL as to the facts, and as the bee-keeper's axiom says, "Bees do nothing invariably," so with the absence or presence of queens in hives in some seasons this axiom has proved true in many cases. When bees "re-queen" of their own accord, there are often about three or four queen-cells already to hatch within a short time of each other, and the resulting virgin queens often go forth on the wedding-trip and fail to return. Where they go to no one knows; you rarely see anything of them on the ground in front of the hives, even when there are seen to be five, six, or seven vacated queen-cells, and only one queen can be found in the hive. Some one will declare there has been a "battle royal" and the conquering queen is reigning; that may be, but where are the others? Have they been driven forth to become the prey of birds, or have they become mated and then entered some other hive requiring a young queen (or it may be a nucleus with queen cells) and been duly accepted? In this way havoc is made with the best-laid plans of the queen-breeder; his batch of fine queen-cells are destroyed by the bees who are badly in want of a laying queen. Such vagaries as these may account for many seemingly inexplicable occurrences in the working of an apiary.

Obituary Note.—I have not seen any obituary notice in B.J. of the late Mr. Jabez Sopp, of Crowmarsh, near Wallingford. The only short notice I have seen of our late friend appeared in *Newbury News* of September 11 (I believe), where it stated that "Mr. Jabez Sopp, the noted bee-keeper of Crowmarsh, died suddenly." In the same week's B.J. Mr. Sopp's name appears amongst the v.h.c.'s for light-coloured honey. Was this a posthumous honour? Our veterans "cross the bar" or drop out of our ranks as time goes on; new men fill up the breach, though those who are left of the "old guard" remember and love those who have stood shoulder to shoulder in the years that are far behind, and pine for a clasp of the vanished hand, or a bee-chat as in days of yore.—W. WOODLEY, *Beedon, Newbury.*

SOME NOTES ON PASSING EVENTS.

[4906.] I am always interested in reading contributions in your pages from such men as "D. M. M.," H. W. Brice, W. Woodley, and others, and I find that all agree in this being an exceptionally bad year for honey, and I note their advice to hold out for a fairly good price. I also note that one of our principal appliance makers has been advertising until this week for good well-filled sections to be delivered free for 6s. per dozen, not a very tempting offer, knowing what the season is like. Like a good many others this year, I have more demand for well-filled sections than I can supply—in fact, it has been a very bad year indeed, many people complaining that they have not been able to get the bees in the supers at all. I have had no trouble that way, but there has been so little honey gathered that, beyond drawing out the comb foundation in many cases, there has been little else done in surplus-chambers.

We are not in what can be called an ideal place for fast gathering of honey, being situated on the borders of Dartmoor. Yet we have apple orchards for spring work, clover in season, and a touch of heather, just enough heather to help the bees in the autumn and save much feeding; we have no beans, limes, or such-like crops.

Skeps were the usual thing here, but they are gradually giving way before the bar-frame hive. I was the first in our parish to adopt the standard-frame, and I have taught others to do the same. It seems easy work to become a bee-keeper now. When I started twenty years ago it was so very different; then the JOURNAL was not known here, and it was

difficult to get a start on the right lines. One can learn more from one week's issue of the B.B.J. than could be obtained from a year or two plodding on without it. Now it is a bee-keeper's own fault if he flounders about in the ditch of uncertainty (as I did at first starting), thanks to the BEE JOURNAL, County Associations and their bee tents, County Council lectures, and a host of experts.

I should like very much to be present at the meeting of representatives of County Associations to be held in London on the 9th, but it is impossible for me. Yet I hope something will be done to bring the County Associations more in touch with the parent society. One thing I would like arranged for, viz., a conference, say, once a year, and each affiliated society to be able to send a delegate, and each County Association, when holding their annual show, to have certificates given from the B.B.K.A. to the successful exhibits.

It would be a good thing, if possible, for the conference to be a travelling one; say, take in all the counties in turn, so that we could all in time get a chance of coming into contact with some of the prominent members of the craft; for to most of us the great men are only known by name, and we cannot afford the expense or time to come to London. I had to travel twenty-seven miles by rail to get a chance of trying for an expert certificate, and had the pleasure of meeting Mr. W. Broughton Carr in a bee-garden, and just missed being examined by him. He came down to Exeter to judge the honey classes and take the candidates. I happened to be nearly last on the list, and before my turn came I had to hurry off to catch the last train. I had to wait another year and travel another twenty-seven miles; yet for all that I am glad to have seen our Editor, even for so short a time. Hoping, if fortune favours, to have the pleasure of seeing more of the B.B.K.A., and that the best counsel will prevail and good come from the meeting of the 9th.—A. GODSLAND (Third Class Expert), *Bovey Tracey, Devon.*

HELPING BEE-KEEPERS.

[4907.] I have got into the way of lending a hand in helping bee-keepers in my district, and in consequence, a neighbour asked me to go and put his bees right for winter. The hives had never been looked into at all since I examined them in May two years ago; they had swarmed and hived themselves into old hives on frames thrown in anyhow. Not a single super had been put on this year, and yet they are the best provided stocks for winter of any I have so far seen in the country, the body-box being crammed with sealed honey. I managed to cut one or two combs out of the back of two of them, but the other (a this year's swarm) I let alone, as it was too much for me. The swarm had hived itself on seven old combs, and built the rest of the combs on the dummy at back. The bees had then passed up above the frame-tops, and built combs upwards in spires and pinnacles all over the top-bars, as the latter had no quilts on them, in fact, nothing overhead but the roof, and had the honey-flow lasted a bit longer, they could have filled the roof with comb and honey. They had built over 6 in. high with comb, so I got a carving knife to work and sliced it down level to frame-tops and covered them down for winter. This was, I thought, the toughest job I should have to tackle this autumn, and wondered if there could be any worse in the land. But I was mistaken, for I was asked to look at some bees that had belonged to a man who was killed in the mine a year ago. I knew the poor fellow had some hives, but thought his wife would be able to look after them; but it appeared they had been left entirely alone. When I reached the place the widow said, "I am afraid you'll have trouble, as the hives have never been touched since his death." I found trouble enough, and for three hours I was cutting and carving out combs and fixing things up. There was only one hive in spring, and it sent out a swarm on Coronation-day (June 26). For two years before this it had not been looked into once. The excluder-zinc had been on all that time, and some wood slabs were nailed on to give the bees a way over the tops of frames, the only covering all that time being three thicknesses of calico thrown loosely on. The bees had plastered every hole up with propolis that needed stopping, and how they lived through last winter and spring seemed little short of a miracle. I had to get a pair of pincers to pull the excluder off. I then found that every frame below was built to the hive-side. They were, however, well stored with honey, and the bees seemed strong and quite content to spend another winter under the same cover. I took out three of the heavy frames, told the widow to empty them in the extractor, then return and give 4 lb. of sugar-syrup to the bees, which would be ample for their winter needs. I then turned my attention to the swarm, which had been hived in a skep, and the skep set on a floor board, the said board and skep then placed on the top of a body-box belonging to a frame-hive. But the bees did not like that side of the board, and so next day, like sensible bees, they changed sides, going in at body-box entrance. And somehow the queen and the whole swarm then deserted the skep and started work below. There were no frames, so the bees built combs to the underside of floor board on which the skep stood. But by some means several combs had fallen down, and when they got them to stick at last the bees had built eight combs, and joined them to those on the floor, so that when I lifted the board up some combs held on and some stuck to the bottom of box, so I had torn them in half in lifting it. This made a big mess, as you may suppose. However,

the widow told me to make the best of them, so I first cut away the combs from bottom of box, then stuck a piece of comb in the inside of a skep, and put this inside the box, with a hive-rug over all to keep bees in, then bit by bit I carved the honey and combs off the board, shaking and brushing the bees off at the entrance, and running them into the skep. Then, when all was done, I told the widow of a man who wanted some driven bees, and would no doubt give her a couple of shillings for the bees, for which she gladly consented to sell them. During all the time I was at work I never got a single sting! So I started for home, thankful that I had got through an awkward bee-job and helped the widow.—TOM SLEIGHT, *Pilsby, Chesterfield.*

YORKSHIRE NOTES.

[4908.] I am afraid my "notes" will have to be in a low key. The season here has been very poor, though I hear of a few not many miles away who have done moderately well. The information I have so far got shows a weight of 28 lb. of surplus per hive down to nothing, and in some instances worse than nothing, bees having been hungered to death in August. With hives that have not been to the moors feeding will have to be pretty general, or they cannot possibly winter in safety. I hear there are many stocks of bees dead on the East Yorkshire moors, and hives that had not ten to fourteen days' provisions in store when taken (say about the 8th to 12th of last month) will have suffered heavily or died outright. One stock in this state when sent in our lot was found to be dead. The reason is obvious—the heather season was at least fifteen days later than usual, and we had only about three fine days in the first fortnight.

It will be of interest, as showing the poorness of the season, to give you an account of the daily work done by a swarm of mine this year, with weight of honey gained or lost between June 26 and August 4. This swarm, I may say, was joined to a very weak lot of bees after removal of their queen. The weights were taken daily, with the following result:—Increase, June 26, 1 lb.; 27th, 3 lb; 28th, 3 lb. 4 oz.; 29th, 2 lb.; 30th, 1 lb. 4 oz. July 1, no gain; 2nd, decrease, 1½ lb.; 3rd, increase, 8 oz.; 4th, decrease, 12 oz.; 5th, increase, 5 lb.; 6th, 3 lb. 13 oz.; 7th, decrease, 8 oz.; 8th, 8 oz.; 9th, 10 oz.; 10th and 11th, increase, 6 oz.; 12th, decrease, 12 oz.; 13th, increase, 1 lb. 3 oz.; 14th, 4 lb. 3 oz.; 15th, 2 lb. 13 oz.; 16th, 1 lb. 9 oz.; 17th, nil; 18th and 19th, decrease, 1 lb. 12 oz.; 20th, nil; 21st to 23rd, decrease, 12 oz.; 24th and 25th, 1 lb. 9 oz.; 26th to 28th, 1 lb.; 29th to August 4, 1 lb. 6 oz. Total weight gained, 29 lb. 15 oz.; lost, 11 lb. 1 oz. Net gain, 18 lb. 14 oz.

I think our average of flower honey will not be over 10 lb. a hive. Of my eight stocks, two have produced no surplus at all. No feeding, however, will be required. While some have a fair quantity of honey in the supers, not one-third of it is sealed over. The brood-combs, however, seem to have a fair amount of sealed heather honey. This is my worst season, with one exception, viz., in 1886, when from fourteen hives I got 9 lb. of honey, dropped £2 cash for food and material, and reduced my stock to five, by the following spring. So, after all, we will say 1902 is not so bad but it might have been worse. Success to bee-keepers and BEE JOURNAL!

P. S.—Limes flowered well. No honey from them. Hundreds of young trees in Harrogate.—G. D., *Harrogate, October* 2.

CARELESS APPLIANCE-MAKERS.

[4909.] In reply to your correspondent "Alvei B." (4901, B.B.J. October 2), I do not think it would be fair to state the name of the county in which I witnessed such carelessness, at an appliance-maker's, in regard to foul brood, on account of other dealers in the same county; but I may say that the maker in question is not, I believe, a manufacturer of "foundation," and I recommend "Alvei B.," and others who fear infection from the cause mentioned by me (on page 386 of B.B.J., September 25), to buy direct from a manufacturer who makes a speciality of foundation-making, as the fewer hands it has to pass through the less must be the risk of infection. —CARBOLIC, *October* 4.

HOMES OF THE HONEY-BEE.

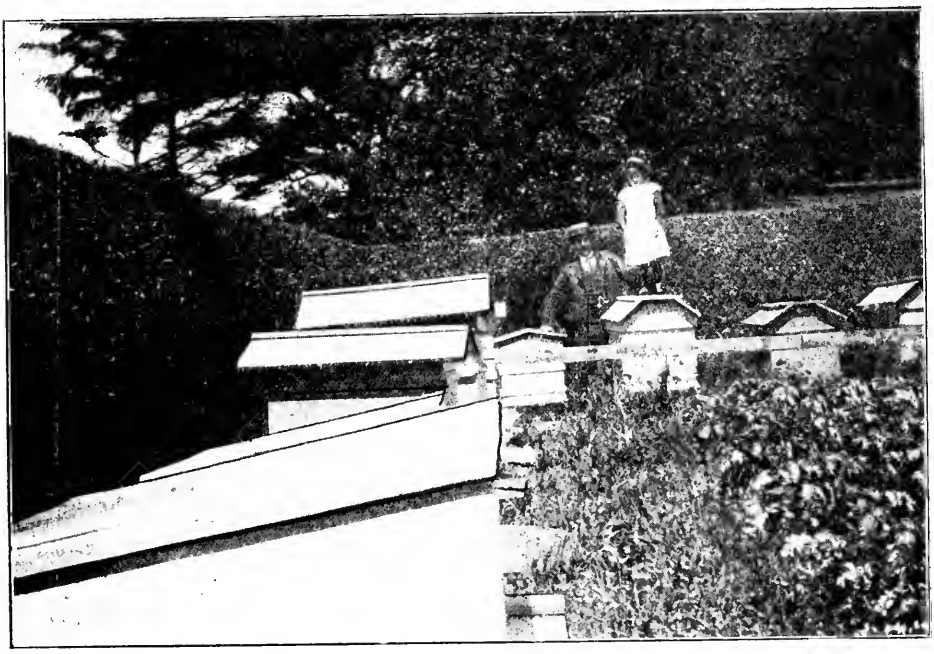
THE APIARIES OF OUR READERS.

We have in Mr. Hastings, a part of whose bee-garden is shown on next page, another Scotch bee-keeper of the best type—one whose school-day experiences in the craft were among straw skeps, but who on reaching manhood lost no time in adopting modern methods and the frame-hive.

The account our friend sends of his bee-work and its results is so full and interesting that it needs no addition from us. He says:—

"I enclose photo of my small bee-garden in the hope that some time you may have room for it in your JOURNAL and *Bee-keepers' Record*, which latter I read with great pleasure every month. With the help and instruction I got from it and Mr. Cowan's 'Guide Book,' I get on famously with the bees. I am sorry to say in our part of Scotland we have had a very poor season for honey, the worst I have had since I started bee-keeping fifteen years ago. But seeing that I had a splendid season last year I do not grumble. It is not too much to say my work lies among the bees and hives. I am wood forester to P. A. Pasley Dirom, Esq., of Mountannan, and have time allowed to do all that

is needful for the bees. I make all my own hives, which are constructed on the 'W.B.C.' principle, as I consider it best for all purposes. The little girl seen on top of the hive is my youngest daughter, aged six. She has no fear of the bees, and has never got a sting, whereas the older ones very often get stung. I have at the time of writing only nine hives with bees in them, and I do not care to increase, for I find they are as many as I can manage nicely. Some bee-keepers who spend a lot of time and thought on non-swarming hives will be surprised to hear that I have scarcely ever had a swarm, as I always give the bees plenty of room in advance of requirements, and this fully answers the purpose of stopping swarming with me. On the question



MR. ROBERT HASTINGS' APIARY, MOUNTANNAN, ANNAN, N.B.

of finding a market for my honey, too, I may truly say I have no difficulty whatever in disposing of all I can secure at about 8d. per lb. in bulk, or 10d. in either screw-cap jars or sections. The photo sent was taken by my employer, but the camera had to be too near to get in all the hives and house.

"My first experience of bee-keeping dates back to the time I was at school thirty years ago, although it is just fifteen years since I started on my own account. My grandfather, who was a shoemaker, kept bees in straw skeps, and attended more to them and to growing herbs in his garden than shoemaking, which was left to the journeymen and apprentices. He wintered always from ten to twelve skeps, so he generally had several casts to suffocate in the brimstone-pit, and I used to go often and watch him working amongst them. He went out bareheaded, with leather apron on and sleeves turned up, and I do not remember him getting stung often. My grandfather brewed a kind of beer called 'bregwort' from the honey along with herbs, and he used scarcely any other medicine than this. I got a skep of bees from him in 1887, and started on my own account at Shawhead, about seven miles west of Dumfries. I borrowed a frame-hive from a neighbour as a pattern, and made one in which I put my bees the next year, together with a swarm that they threw, and this same hive and frames have never been empty since. Although there never has been a very big return, my bees have always given me some surplus. I was very seldom at home for a number of years, so my mother attended to them, with the help of 'The British Bee-keepers' Book for Beginners.' Twelve years ago I married and settled in Annan, since when I have gone in for bee-keeping in earnest, and have since increased the number of my hives, until I have now nine strong stocks. I give them plenty of room, and very seldom have had a cast or swarm during the last four or five years. Ours is not a very good locality for 'record takes' of honey, but the honey is mostly of good quality, from white clover and limes; the heather is too far away, and I think we have too many woods round about for extensive

gathering. There are a good many bee-keepers in this parish, and some of them do very well, and I am glad to say I have never either seen or heard of foul brood yet in this district. I have never tried queen-rearing yet, but would like very much to be able to raise my own queens. I will make a trial of it soon, as I find that when I can get driven bees to strengthen the old hives, they work with renewed vigour. I have just got about 20 lb. of honey this year from all my hives, and not very good in colour. I showed extracted honey last year at Dumfries and at Edinburgh, and I got a second and four minor awards in different classes at Dumfries, and a second at the Edinburgh Home Workers' Exhibition. I was very pleased with my first efforts on the show-bench. I have an extractor and ripener, and sell nothing but ripe good quality honey.

"In conclusion, I think every one should have a hobby of some kind; and, where there is a suitable place for an apiary, there can be no more interesting one than bee-keeping. The little workers are a very interesting study, and you can learn nothing but good from them—except when they use their stings to excess, and with careful handling that can be avoided."

WEATHER REPORT.

WESTBOURNE, SUSSEX.

September, 1902.

Rainfall, .88 in.	Sunless Days, 1.
Heaviest fall, .35 in., on 2nd.	Below average, 21·5 hours.
Rain fell on 9 days.	Mean Maximum, 63·3°.
Below aver., 1·48 in.	Mean Minimum, 48·7°.
Maximum Temperature, 69°, on 7th.	Mean Temperature, 56°.
Minimum Temperature, 37°, on 18th.	Above average, 1·2°.
Minimum on Grass, 25°, on 18th.	Maximum Barometer, 30·62°, on 26th.
Frosty Nights, —.	Minimum Barometer, 29·78°, on 12th.
Sunshine, 158·3 hours.	
Brightest Day, 13th, 10·8 hours.	

L. B. BIRKETT.

CONVERSATIONS WITH DOOLITTLE.

HOW TO SECURE WORKER COMB FROM "STARTERS."

"Good morning, Mr. Doolittle. Too cold for the bees to work this morning, and here it is nine o'clock the 16th day of August."

"Yes, it is very cold for the time of year, Mr. Brown. The mercury stood at only 10 deg. above freezing this morning, and the same on the morning of the 13th. I fear we are not going to get much buckwheat honey on account of the cold, as it is now nearly in full bloom; and the hives do not have at present one-fourth enough honey in them for winter; and unless we have a yield from buckwheat it means feeding for winter stores—something I have not had to do for twelve or fifteen years past. But we will not dwell on this part of the matter. What can I do for you this morning?"

"Having no surplus honey this year, with a prospect of buying sugar for winter stores, owing to our wet, cold summer, I thought to economise a little by having the bees build their own comb in the frames next season instead of buying foundation, as I have generally done. I read somewhere that you had the most of your combs built in the frames without the use of foundation, only as starters, so I came to talk the matter over with you."

"Yes, I have allowed the bees to build many combs in the frames and mainly did this when I first began bee-keeping. But what part of this comb-building has bothered you?"

"In taking out the combs and inserting frames having only a starter, I find the bees almost invariably build drone comb."

"Yes, that is as I have found it all along my bee-keeping life, for the same has shown that it is folly to insert a frame, having only a starter in it, in a full colony previous to the swarming of that colony, with the hope of getting much if any worker comb; and if frames must be inserted in such colonies at such times, it will pay the apiarist to purchase comb foundation for such frames, even though he has no surplus honey, rather than try to get them filled by the bees."

"But suppose we have worker combs on hand for such times."

"That would be all right; in fact, I consider built-out combs even better for such places than frames filled with foundation. For where only one or two frames of foundation are placed in a hive between combs, when honey is coming in from the fields, the cells from the comb along the top-bars to the frames are extended so they jut out into the space that belongs to the frame having the foundation in, before the foundation is drawn fully out, so that we have 'fat' combs in some frames and 'lean' ones in others, in a way that causes much trouble in exchanging them, especially in hives having frames at fixed distances."

"But these extra combs cause us to presuppose that they have been built some time, so we come to the main idea how to secure extra frames of worker comb without using full sheets of foundation."

"I find that there are three conditions of the hive or colony under which, if rightly managed, the bees will almost invariably build worker comb."

"Now you are talking about just what I wished to know. Tell me about the condition you consider best."

"The surest of the three ways is when a colony is quite weak, or what we term a

nucleus. If such a colony is deprived of all of its combs save one of honey and one of brood, and a frame having a starter in it is inserted between the two combs left in the hive, the bees will, ninety-nine times out of a hundred, fill that frame with worker comb, and said comb will be as perfect as one built from foundation under the most favourable circumstances. Taking advantage of this fact, I take frames of brood from the weaker colonies I have at the beginning of the honey-flow, those too weak to work in sections to advantage, and give this brood to the weaker of the stronger colonies, and set the weak colonies to building comb, as I have explained. You will note here that I really make a gain in this way as to surplus honey, for this brood, where placed, gives better results in section honey than it would have done had it been left where it was with the weak colony, as it almost immediately puts the bees of the colony where given (into the sections) at work, while, had the brood remained in its own hive, these colonies would have been somewhat slow in starting in the sections."

"Well, that is quite a scheme, surely; for we can really kill two birds with one stone in this way. I wish I had known of this matter last year, as I had several colonies that I could have worked that way. But what of the second best plan?"

"The second is, at the time of hiving new swarms, which are treated in this way when I wish them to build worker comb. The swarm is hived on the full number of frames the hive contains, and left for thirty-six to forty-eight hours, a super of sections being put on when the swarm is hived. The hive is now opened and five of the frames are allowed to remain—the five that have perfect worker comb being built in them, and dummies are used to take the place of the frames taken out. This throws the force of bees, not needed below, into the sections, so that the bees do not need to build any store comb in the brood-nest, which store comb, when built for that purpose, is generally of the drone size of cells. By this time the queen is ready to keep up with the bees in their comb-building with her eggs; and in this way, nine times out of ten, I get these five frames filled with worker comb, and, besides, secure a good yield of section honey."

"Why do you wait from thirty-six to forty-eight hours about arranging the hive? Why not give only the five frames at the time of hiving?"

"Glad you asked that question, as I should have forgotten to speak of something that would have bothered you had I not told you. In the first place, a swarm given only five frames when hived is liable to think the place of abode too small, and leave, or swarm out, and such a procedure is a nuisance. In the next place, when any colony having an old or laying queen is first hived, the bees are likely to build comb too fast for her, hence some of the combs first started are liable to be of the drone size on account of the queen not being in condition to lay many eggs at first, as all queens cease almost entirely to lay for twenty-four hours previous to swarming, so that they may be reduced in weight that they may fly and accompany the swarm; and full prolificness does not return under forty-eight hours after the swarm has commenced keeping house in its new home. And as these combs, having the drone size of cells, are just right for store combs, the bees generally, when once started, keep right on with that size of cells till the bottom of the hive is reached."

"I see now why I have had so much drone comb built when hiving swarms without giving frames of foundation, and I am glad to know of this matter. But I must soon be going; but I should like to hear of the third plan before I go."

"The third condition under which worker comb will be built is just after the young queen gets to laying in any colony having cast a swarm. If, after she has been laying two or three days, we take away two or three combs and put frames with starters in their places, we shall find that these frames will be mainly filled with worker comb. As the bees are now over the swarming fever and desire worker bees to promote the welfare of the colony, no drones are needed, and the young queens are not likely to lay in drone comb. However, we are not quite as certain of all worker comb in this case as we are in either of the other two, as there are plenty of built combs in the hive for the young queen to use, and it sometimes happens that the bees will prefer to leave off storing in the sections and build store comb in the frames, thus defeating what we are striving to attain."

"Well, thanks until you are better paid. I will try all the plans next year, and then I can tell more about how the matter works with me. Good day."—*Gleanings* (*American*).

Queries and Replies.

[2981.] *Removing Sections. A Tough Job.*—Being called by a neighbour to take some sections off a hive on which they had been placed by another man in the beginning of the summer, I naturally thought it would only be necessary to put on, or possibly adapt, my super-clearer for use, and remove the honey, when cleared of bees, without further trouble; but on examination, I found the following situation:—The sections were arranged much the same as a handful of matches arranges itself if dropped on the floor, and apparently the sections had never seen foundation. Some few in a corner were massed together with honey and comb. After managing to haul off the honey, somehow I found the body-box has been made too long one way and too shor the other for the "Standard" frame. Acros

one-half of this said body-box plain slips or bars of wood had been nailed, that was all. The bees have, of course, built combs right through this space in all directions; it is full of honey and the bees are strong. I want your advice as to what should be done? To me there appears two ways. First: In the spring tilt the box up cornerways and hammer away until the bees are driven out. This would probably take some time, but I think it could be done, then start in a new hive; or secondly: In the spring place other bars of wood where these are missing; fix piece of excluder zinc over body-box, and make a temporary section-rack suitable for holding as many sections as it will take and get next season's surplus honey stored therein. Then in the autumn proceed as suggested above for first plan. 1. Would either of these methods be likely to meet with success, or can you let me know of one which would? 2. Another thing on which I wish to have your opinion. I have seen people here in Ireland make syrup (for bee-food) this way. Take a large bowl without a bottom, over the lower opening tie a piece of muslin. Half fill with sugar, place over a jar, pour in water and let it filter through. I do not think the plan a good one. What is your view? I do not like to trouble you unless I cannot help, but there are occasions on which your assistance is invaluable.—Thanking you in advance, SLIEVE DONARD, *Newcastle, co. Down, Ireland, October* 4.

REPLY.—1. Without saying that either of your plans is unworkable, we advise an alternative to both, viz., to winter the bees in the present body-box, after contracting the size by shutting off the space in which the combs are cross-built, and deal with it in spring as directed in the well-known method of allowing bees to transfer themselves from skeps to frame-hives. 2. No plan of syrup-making equals the one given in "Guide Book." The one you mention results in simple sugar and water, not bee-food.

[2982.] *Wax Moth and Store Combs.*—I have had so much trouble through moths damaging my ready built combs that I am led to ask what is the safest way to preserve such for use in future seasons? All I could get my bees to do in the past poor season was to build some nice shallow-frames of comb, for though they put a little honey in them at the end of June, it was either carried down into the brood chambers or used for food. Thus my only asset in surplus-boxes is these combs, which, of course, are worth something. I have nearly four dozen of them ready for use in 1903 if I can save them from moth-ravages. Your reply will be esteemed by—A YOUNG BEE-MAN, *Staffs, October* 3.

REPLY.—Store combs for extracted honey are so valuable an "asset" to an up-to-date bee-man that their safe storage for future use is an item of work that no good bee-keeper will grudge time over. In reply, we therefore reproduce below a sketch of a simple contrivance devised by ourselves many years ago, which in our hands answers the purposes of storing combs for future use and keeps them clear of moths.

The "body box" (fig. 1) is 9 in. deep,

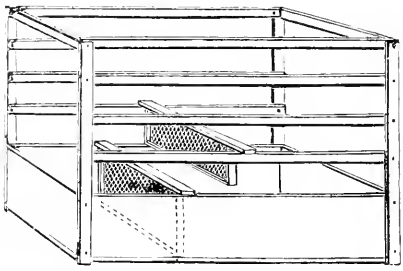


Fig. 1.

14½ in. from front to back, and 32 in. long, inside measure. So that, if needed, standard size combs may be stored therein. Three-quarter-inch or even ½-in. board is quite strong enough for the sides and floor of the body box. The uprights at each corner are 33 in. long, 2 in. wide, and ½ in. thick, nailed on to the outside of body box. Four light rails—slaters' laths answer well for these—front and back form the runners on which the frames hang; they are nailed on the inside of uprights with their top edges 6 in. apart, the top rails only being continuous. This rack when complete is very light, and will comfortably hold 100 frames.

The sketch (fig. 2) represents the frame of cover, and is made of very light laths, the

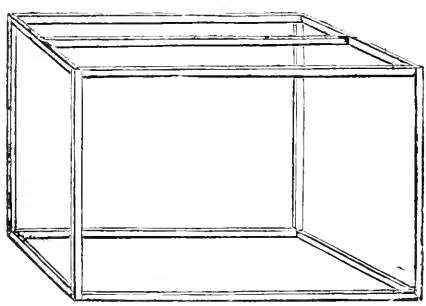


Fig 2.

uprights being 34 in. long, and the interna dimensions of just sufficient length and width to slip easily over the "rack" when the latter is full of frames of comb. When nailed up, this frame has a covering of several thicknesses of strong paper pasted together, and the whole is then complete. The cover fits down over all quite close to the ground, and we find that no moths or spiders, &c., ever attempt to enter at the bottom edges. A dozen balls of naphthaline are placed in the body-box, and the fumes will permeate the whole of the

PREPARING BEES FOR WINTER.

In compliance with a request for a means of recording the condition of all colonies in the apiary after completing the necessary preparation for wintering, and also for general reference regarding each hive's history and "doings" for the past year, we insert the practice to enable him to see at a glance (*a*) number of hive; (*b*) queen hatched on June 5 last year; (*c*) queen came from hive No. 8; (*d*) bees strong in autumn when examined; (*e*) combs in hive need renewing next spring; (*f*) 67 lb. of surplus was taken; (*g*) 9 lb. of syrup food required to complete winter stores; (*h*) feeding finished October 1;

REGISTER OF AUTUMN EXAMINATION OF STOCKS—OCTOBER, 1902.

Number of Hive.	Queen Hatched.	Hive Queen came from	Condition of Bees.	Condition of Combs.	Honey Yielded.	Food Required for Winter.	Finished Feeding	Number of Combs.	Remarks.
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above table, in which, as will be seen, provision has been made for ten stocks of bees. Where a less number are kept, additional columns may be arranged under the others with such headings as it may be desired to take note of. If, therefore, the reader will suppose the ten columns to be filled up as shown below, it will only need a little (*i*) bees wintered on eight combs; and (*j*) that, as food is only noted as "fair," candy will be needed in March.

The doings of each colony in the apiary will thus be recorded, and much trouble saved in the coming winter and spring months by having notes for reference indoors without having to open hives.

5	5/6/1901	No. 8	good	faulty	67 lb.	9 lb.	Oct. 1	8	Give candy in March.

(*Queries continued from previous page.*)

combs and stop mischief. For fumigation of combs with sulphur, space is allowed in body box for holding the burning brimstone in an old tin-lid, and when a hot coal is put in, the cover is placed over the whole, and effectually keeps in the fumes.

"PERFORMANCES" IN THE BEE-TENT.

A copy of the current issue of a county newspaper has been forwarded to us, in which the following paragraph was marked presumably for publication:—

'In addition to the show proper there were various other attractions in the grounds, chief amongst which was the bee-tent, in which Mr. ———, the County Instructor in Apiculture, lectured and gave demonstrations on the artificial swarming of bees. His operations included transferring bees from one hive to another, and taking the honey without destroying the bees by the fumes of burning brimstone, which is the practice of bee-keepers of the old school. To prove how little there is to fear from bees when managed according to their natural instincts, Mr. ——— performed some new and extraordinary feats with swarms of bees. The first was to place a hive containing several thousand bees over his unprotected head and face, and walk from the bee-tent round the show-ground. He then re-

peated the feat, but instead of walking rode a bicycle. On removing the hive containing the swarm of bees from over his head a gentleman inquired how many times he had been stung. Mr. ——— replied not once during the two feats, and he felt much more safe with his head in the hive with the bees than he should with his head in some person's hats without bees (laughter). Mr. ——— next attracted a swarm of several thousand bees to cluster on his bare hand and arm, and carried the swarm about the show ground. A gentleman came and touched the bees with his hand, but the bees showed no resentment."

"Mr. Mills, of London, gave ventriloquial and conjuring entertainments, &c."

We have omitted names and places advisedly, and hope it will not be taken amiss if we venture to say that the "County Instructor in Apiculture" will consult his own dignity and that of the industry he represents officially by refraining from such "performances" as are detailed above. To have a lecture and bee-demonstration given—we suppose—under the auspices of the Technical Instruction Committee of the County Council described as "new and extraordinary feats performed with swarms of bees," as detailed above, is more apt to reduce bee-craft to the level of the "ventriloquial and conjuring entertainments" of the performer from London, whose "feats" not inappropriately are referred to immediately below those of the performer in the bee-tent.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

*** A correspondent signing himself "Out-Apiarist" (Cirencester) writes:—"Would you please invite brother bee-keepers who have tried the 'Edwards' swarm-catcher during the last season to give their experience in B.J.? It would be appreciated."

P. Robinson (Hayes Common).—*Foul Brood Prevention.*—The remedies recommended by this journal are so well known that there is no need to ask our opinion with regard to them. With the opinions of those who differ from us we have nothing to do; but, in reply to your question, we are entirely in accord with the advice given by the lecturer mentioned, so far as regards the value of naphthaline in bee-hives.

Esher (Somerset).—*The Bad Bee Season.*—There is no need for us to give "special instructions" with regard to treatment of bees for the present year. Bad bee seasons are unfortunately not rare, though we hope it will be a long time ere so bad a year for bee-keeping generally as 1902 will recur. Meantime the only thing really needful is to see that all stocks have a full supply of food (say, 20 lb. at least) for wintering on. This done, we hope to see bees come out strong and ready for a successful year's work in 1903.

A. L. Grimshaw (Ashton-on-Mersey).—*Bees not Sealing Food in Autumn.*—It is always best to winter bees on sealed food, but if the syrup in unsealed portion of combs referred to is so thick as stated it will do no harm whatever to leave it in the combs, as the bees will use it for present needs.

E F. (Balby).—*Syrup-Food Making.*—1. We should require a sample of the sugar, and the method of making, before venturing an opinion "why the bees fall on the ground by dozens as if intoxicated." 2. With regard to sugar crystallising on muslin and preventing bees from getting at the food, as stated, it arises from the fact of the bees not "feeding" from the inverted bottle at all till the syrup crystalises on the surface of muslin.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul Brood."

We urgently request that all letters sent with samples of suspected comb be put outside the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

G. D. (St. Mary Cray).—There is foul brood in both samples of comb sent.

A. K. M. (Spalding).—A bad case of virulent foul brood. Drastic measures should be taken with the stock.

E. W. W. (Winchelsea).—There is foul brood of old standing in comb.

J. Jenkins (Cardiff).—Your second samples are no better than those first sent, so far as being unsuitable for the purpose of diagnosing foul brood. There is practically nothing to judge from. In the small bit of crushed up comb we find a single larva dead from cold, but there may be in other combs plenty of material that could help us in forming an opinion. The fact of bees being unwilling to take food at this season is no indication at all of disease; nor is the fact of them refusing to carry unsealed food down into the brood-nest below. On the other hand, any food offered in late autumn should be good, freshly-made syrup given warm, not "syrup made last spring with an overdose of salt." The fact of the bees having refused this syrup last spring should account for their present refusal.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONFERENCE OF COUNTY REPRESENTATIVES.

A conference of representatives of County Bee-keepers' Associations with the council of the B.B.K.A. was held at 105, Jermyn-street, on Thursday, October 9, at 4 p.m., for the purpose of furthering the interests, economical working, and general welfare of the various societies, and conducing to the establishment of more intimate relations between the B.B.K.A. and its affiliated societies. There was a large attendance, the spacious board-room being filled by gentlemen representing the various County Associations affiliated to the B.B.K.A.

Mr. T. I. Weston (Vice-Chairman of the Council) presided, and opened the proceedings by calling on the secretary to read the notice convening the meeting, and also letters of apology for absence from a few members of the committee and from county delegates. This having been done, the chairman explained that the conference was the outcome of a resolution proposed by Colonel Walker on the occasion of the monthly meeting of the council held on November 2 last year. It was said there was a general feeling that the central body and County Associations were not so closely in touch as was good for both of them. In pursuance of the resolution the council of the B.B.K.A. had drawn up an agenda of subjects for discussion which seemed to be most suitable and important at the present time. The first topic before them for consideration was "The Difficulties Experienced by County Associations and the Most Successful Ways of Meeting Them," and he would be glad if some representative would open the debate by narrating his experiences and difficulties.

Colonel Walker then rose and said it was not a new thing for members of County Associations to meet the Central Council; in fact, the practice was common quite early in the records of Associations, when there were very few county auxiliaries. Of late years, however, the opportunity had not been taken much advantage of, although the parent Association always encouraged it. In his own county (Devon) the supreme difficulty was "money," and the want of it had been the trouble always. In former days this difficulty was less hard to meet than at present, notwithstanding the fact that they now had the County Council behind them. In 1899, the first time his Association approached the County Council, it made terms with the latter, and induced that body to supply a bee-tent, which the Bee-keepers' Association was allowed to make use of on payment of carriage, while it remained the property of the County Council. Good work was done in this way, but the next year his Association succeeded in obtaining a grant, a sum sufficient to enable them to hire a bee-van, to be sent round the county. This van tour was very successful, and had the effect of securing a few new members to the local body. The following year, 1901, he and his Committee thought they could do better, and managed to obtain a similar vote of money to be used for lectures at shows. They found, however, that the sum granted could not be satisfactorily expended in that way, and as the money voted must be utilised only in the particular mode agreed upon previous to the grant, they returned the balance of the grant to the Council, having only disbursed a small proportion of the whole sum. In 1902 the Devon Association saw that unless some different arrangement were come to no proper headway would be made, and application was therefore made that the new grant might be split up into different heads, viz, two-thirds of the whole for the expert tour, and the remaining third in equal portions for shows and for literature. This was agreed to, but the County Council would not allow any portion of the amount allotted for literature to include assistant secretarial expenses except for "postages." The carrying out of the work involved by this grant was a severe strain on the secretary, and it seemed only reasonable that he should be allowed clerical help. Nevertheless, his committee thought they had done very well, and in the literature department had been able to include the cost of the monthly journal issued by them, and the leaflet inserted therein. The expert tour had gained them ninety-nine new members this year, and he thought his Association had been fairly successful in its efforts. One feature, however, must always be borne in mind, which was that "grants in aid" were never certain to be repeated. Newly-elected County Councillors might not hold the same views as their predecessors. One of the difficulties his Association had, along with most others, he supposed, was to get members to pay their subscriptions, and on that point, no doubt, they would like to hear suggestions.

Mr. A. G. Pugh (Notts B.K.A.) thought the Devon B.K.A. was to be congratulated, for although Colonel Walker complained at first of their difficulty in getting money, yet he finished by announcing a very liberal grant from the Devon County Council. Most counties would envy his success. Referring to his (the speaker's) own county, the local Association held a committee meeting on the first Saturday in the present month, when he was deputed to ask at this conference whether the B.B.K.A. had any reserve fund from which it could help its struggling affiliated County Associations? Having been for many years a member of the parent society, he had told his friends not to think of that, knowing, as he did, the dearth of funds at the head office. He rather differed from Colonel Walker regarding the actual value of County Council support, being inclined to think that

instead of their being a help to the county B.K.A., they might possibly be the reverse. The Notts B.K.A. had received from the County Council a grant which had gradually increased from £10 to £40, and his Association suggested to the County Council that this sum be spent upon an expert tour. This suggestion being agreed to, his Committee drew up a scheme and made the necessary arrangements. The result, however, was that after the expert had rendered all the assistance required by members, the latter began to ask, "Why should we continue to pay a yearly subscription to the Association for assistance which the County Council is paying for? And this being so, there is no need to subscribe any longer to the County B.K.A." It thus became obvious that if those views became general the Association would eventually cease to exist. Some people do not take a broad view of these matters, but were always inclined to ask, "What shall *I* get for my money?" And it was difficult to convince these people that they were getting anything if the expert service was being paid for by the County Council. If his Association could keep the membership up to 200, it could exist fairly well, but it was a difficult matter to keep up their numbers, and any suggestions from this meeting in the direction indicated would be welcome to his Committee. The question was also asked at his meeting, "What does the B.B.K.A. do for us in return for the affiliation fee?" He had always supported the payment of this fee, and pointed out that the "British" did much more for the cause throughout the country than the local members were aware of. Probably, among other things, they did not know that the British had a large library of bee-books which was at their disposal. He thought it would be a wise thing for the central body to publish a leaflet stating what they had done and were prepared to do for the affiliated Associations. This would open the eyes of many country bee-keepers, who thereby would feel themselves in much closer touch with the parent body than they could be under present conditions.

Mr. Pears (Lincs B.K.A) said that in Lincolnshire they used to have a grant from the Lindsey Division of the County Council, but it had been withheld during the last two or three years, owing to the County Council being divided in opinion with regard to it. His Association was the means of a great many lectures being given in different parts of the county, and had secured many new members thereby. Next year a strong effort would be made to regain the help formerly given by the County Council. The grant of £20 which they had at one time was a small matter, but much good in helping cottagers had been achieved by its help. At present his Association numbered 500 members, and they held several shows within a radius of ten miles, as well as supporting local flower shows by small money grants and medals, &c.

The Rev. W. E. Burkitt (Wilts B.K.A.) endorsed the general complaint about the lack of funds. The Wiltshire County Council would not grant his Association a single sixpence. They pay the expense of sending the Association's bee-tent to shows and appoint several men as their own experts, he (the speaker) being one of those employed to a certain extent for that purpose. Some of these so-called experts were not certificated at all. Their visits had damaged the Association, and caused a loss of membership. The uncertificated men could handle bees very well, but they were at a loss sometimes. The experts made returns to the County Council of everything they did, all of which particulars were published in the County Council Reports.

Mr. H. Hill (Derbyshire B.K.A.) expressed himself as unequal to the task of solving the difficulties experienced by the Derbyshire Association. They had changed Committees and Secretaries with the object of importing new blood, but he did not discern much improvement. They had a County Council grant, which was used chiefly for lecturing. He did not think it had gained them any new members to the Association, and he was inclined to indorse Mr. Pugh's opinion, though it might induce a few persons to start bee-keeping, who would eventually join the Association if an expert was sent out by the Council. He (the speaker) found that if one talked to the local members about the advantage of "shows," they would generally retort: "Yes, but that is all in the hands of experts, and the prize-money gets divided among a few." Personally, he believed that nothing was better than a show for educational purposes. If the County Council would agree to pay the cost of literature and the distribution of it, his Association would be thankful for removing from it an expenditure of about £15 per annum, which was a great demand on their resources. The Derbyshire Association had been in existence twenty years, but it needed some renewal of activity. A good local expert was no doubt the chief pillar and support of an Association. He should be a man who studied the bee-keeper and not himself only, as many did.

Mr. Allen Sharp (Hunts B K A.) said the Hunts Association had been established twenty years, and he had been a member from the commencement. Their lamentation, like that of the other county associations, was want of funds, and the difficulty was how to get them? The County Council made them a grant of £20, but did not permit of it being used as the Association would like. For two or three years the latter were in the habit of paying experts to lecture, but that did not add much to their membership, and instead of giving lectures the expert was now sent round to visit bee-keepers at their own apiaries and to give them advice and instruction. He (the speaker) did not know that any local benefit

had been derived from being affiliated to the B.B.K.A., nor did he know how matters could be otherwise. He had experienced much of the difficulty referred to by Mr. Pugh, namely, the desire of bee-keepers to see a tangible *quid pro quo* for their affiliation fee. Their members were falling off in numbers, but he was not without hope of an increase in the near future. For some time past their Committee had been considering a scheme for turning the Hunts B.K.A. into a mutual benefit society. One difficulty of the members was to know how to get at the wholesale market price of honey. In consequence of this members often undersold one another, and he had known a divergence of as much as 2s. per dozen in the price of sections. His Committee wanted to devise a system of sending in a return by each member at the end of every fortnight or month stating the quantity of honey sold and the price realised. This plan would give a sure indication of the market value, and would have a tendency to form a "ring" and keep up prices for the benefit of the producer. Then they had another project in view. It was admittedly a serious matter if any bee-keeper were taken ill during the honey-season. In this event the bees must be left to themselves, and most likely the season's honey would be lost. Therefore, they proposed that if any accident of the kind should happen the members take upon each other the responsibility of managing the sick man's bees during the season; and, in the event of death following, the Association would come forward and dispose of the apiary to the best advantage, which they could, no doubt, do better than the widow could. They had also thought over the matter of insurance since the "hitch" or stoppage had occurred in the B.B.K.A. scheme some months ago, and a proposition was afoot to insure amongst themselves. (Mr. Carr here intimated that all difficulties in the scheme referred to were now removed, and several thousand pounds' worth of insurances effected through the medium of the B.B.K.A.). Another idea of his Committee was to hold their meetings in places where there was an apiary near at hand. They had had one very successful meeting under these conditions, and discussed matters which were capable of practical demonstration and examination there and then. There were between fifty and sixty members of his Association, and since holding the last meeting promises of several new subscribers had been received.

Mr. Bishop-Ackerman (Berks B.K.A.) said the experience of his Association in Berkshire with the County Council had been rather better than that of some branches. For the past twelve years the County Council had granted £50, which for the first year or two was used more particularly for lectures. Then it was decided to have a bee-van built and furnished and sent over the county, but although the County Council grant was supposed to cover the expense thereof, it did not do so, and a debt was being contracted. The County Council laid down certain restrictions, but two years ago his Association asked that body to allow the Committee to work on their own lines; and now, besides the bee-van tours in the north, south, and eastern divisions of the county, they had used a portion of the money for expert work, with better results. The expert visited members and non-members alike; but members were promised an extra visit in the autumn. This had been done, and yet the Association was able to boast of a balance on the right side. Two years last February it had a deficit of £56, which had since been converted into a surplus of £7, and at the end of the present year he hoped to report a balance of between £20 and £30. The system of giving to members two visits by the expert had greatly increased the number of subscribers. There were 300 members at present, and he hoped for a further augmentation thereof.

Mr. Sheppard (Essex and Suffolk B.K.A.) considered that in Essex the expert's services were the Association's strong point, and most good to the funds was derived from the same. His committee tried in this way to give the members as good a return for their money as possible. The Association provided labels, which were greatly appreciated, and had a system of providing money for local shows, which was also regarded with much favour. The membership numbered 400, and was gradually increasing, the sphere of the Association having latterly extended to Suffolk. About five or six years ago the Association's accounts showed a deficit of £40, but that had been met and replaced by a balance to the good of £15. They had no grant from the County Council. In reply to questions, the speaker said that the 5s. members were the backbone of the Association. He had a few honorary members at £1 1s. and 10s. 6d.; but, above all, the Association possessed a good "expert," which, he thought, accounted in large measure for its success.

The Chairman (as a member of the Essex B.K.A.) said that in Essex they had been at cross purposes with the County Council, and that was perhaps the reason why no help was forthcoming from that quarter. It seemed to be considered by their Notts friends that County Council grants were a detriment, because the members, getting their work paid for out of the rates, saw no reason why they should support the Association. On the other hand, Devon and Berks seemed to be more than satisfied with what they had done. Thus it was curious that there were three or four counties worked on different lines, yet with fairly good results. Personally, he thought that associations ought to work *with* County Councils, but it must be done thoroughly. Every effort should be made to prevent these bodies appointing men as lecturers who were not fully conversant with their business. The

associations ought, by means of their experts, to strive to put themselves in such a position of influence that they can go to the County Councils and apply for grants with a good prospect of being listened to. The educational side of the subject should specially be worked through the County Councils, not only to the satisfaction of the latter, but to that of the members. Mr. Sharp had, he thought, started a fresh idea when speaking of mutual help among members in cases of sickness or death during the honey season. He (the Chairman) did not remember to have seen that suggestion mooted in the Report of any County. The proposal was, he thought, an excellent one, and could, perhaps, be carried out in small neighbourhoods, but whether it would be practicable over a large area he did not know.

Mr. Turner (Oxfordshire B.K.A.) said that their Association had received the greatest help from the County Council. Some years ago it gave £50 towards apiculture, but owing to bad management the grant had been refused for a time, since which an energetic secretary had brought about a revival, and now £30 was allowed. This was intended principally for lectures, but instead of giving lectures to an audience of perhaps half-a-dozen people, the Association had arranged that a couple of bee demonstrations should stand for three lectures in a country village. This enabled them to make better terms with the expert, who, supposing he was visiting any town, would give one or two lectures in the afternoon and then visit all the apiaries, where if desirable demonstrations could be given. He considered practical demonstrations far preferable to dry lectures in a schoolroom. The Association had a large number of 1s. members, and another feature of their system was that 5s. subscribers were allowed (and everybody liked a little patronage) to nominate two villagers who should have the assistance of the expert. The experts sent out were all qualified. One of them, Mr. Hancox, of Steeple Aston, acted from mere love of the craft. He (the speaker), as hon. sec., found it difficult to get subscriptions, and one method of collecting them was to refuse the expert's visit in the autumn until after the contribution was paid.

Mr. Pugh, referring to his previous remarks, wished it to be clearly understood that he did not oppose County Council grants. The point he wanted to drive home was that the work should be done by and through the Associations, and not by the County Councils acting independently of Associations. The obvious reason for this was that if the expert felt that the County Council was paying him, he would not care (certainly in many cases) whether the Association sank or swam; while, on the other hand, if he knew his engagement depended on the success of the Association, the case would be quite different.

The Chairman then introduced the next item on the agenda:—"The establishment of uniform returns from each county, showing the number of bee-keepers, the number of stocks owned by them, the prevalence or absence of foul brood, &c." He dilated on the importance of securing information respecting the number of skeps in the country, as compared with bar-framed hives, and where the former were most prevalent. Also the quantities of honey raised in different localities. A form could be drawn up embodying these and other questions, and sent round through local Associations to—if possible—every bee-keeper in the kingdom, whose names could be kept private. The B.B.K.A. desired to be in a position to go to County Councils and say:—"This is the state of the bee-keeping industry; is it not worth your while to foster it?" The authorities were apt to consider that the production of honey was quite a local concern, for which there was no market, and that it was therefore not worthy of consideration. Apiculturists wanted to prove the contrary, and his suggestion was one of the means to that end. An advertisement which had appeared, offering £75 per annum for an expert in Ireland, showed that there was life in the industry, and it was desirable to further prove this by statistics.

Mr. Hill said their Derby county experts always stated the number of skeps and bar-framed hives, but as to details of the quantity of honey raised that information could not be obtained, even if there were no objection to the inquisitorial character of it, until the autumn visit.

Mr. Ackerman thought the task would be a heavy and expensive one. A similar undertaking cost his Association £63 to obtain the information. True, they received a grant of £50 for the purpose, but this was exceeded by £13. There were 1,500 bee-keepers in Berkshire.

The Chairman replied that nothing like that sum was spent in taking a census of Essex. He himself obtained, as far as possible, the names and number of hives of every bee-keeper in the county, and was astonished at the existence of so many. The information was derived from the public schoolmasters, who in their turn received particulars from the children under their care as to the number of hives, &c.

Mr. Ackerman said the Berks inquiry was conducted by the expert, who, firstly, obtained the names of all bee-keepers from the schoolmasters, and then as far as possible visited every one of them. This service, of course, had to be paid for.

Mr. Carr remarked that in Ireland, where statistics are published, the case was altogether different, as the work was done by the police through the Department of Agriculture. He feared that any attempt to discover the amount and value of honey raised by each individual bee-keeper would be impracticable.

The remainder of Report will appear in our next issue.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

[4910.] *Borage.*—This is an excellent honey plant, and if grown in considerable quantity would appreciably increase the season's yield. Unfortunately, it is not very handsome, though its flowers, taken individually, are very fair and lovely, and their bright and vivid shade of blue is exceedingly beautiful. A well known lady writer lately described them as "buds of heaven's own blue," but the shade varies, and is sometimes far too light to be compared to a sky-blue. She is happier in a second simile when she makes a young mother describe her baby's eyes as "those eyes of borage blue." Further, she happily characterises the borage as "the alluring plant." A curious superstition existed at one time, and it was believed that this plant held the secret of a magic potion which was capable of scaring all grief, so that one's very dearest might die and never be missed by any one who partook of this magic libation. Those who believed in simples reckoned it among the cordial flowers, and Gerarde tells us that the flowers were put into salads "to make the mind glad." "They comfort the heart, drive away sorrow, and increase the joy of the mind." Alas, no nepenthe such as this exists for us in modern times. Even, however, at the present day a high authority informs us that the leaves of the borage impart a coolness to beverages in which they are steeped, and with wine, water, lemon, and sugar, enter into the composition of an English drink called "a cool tankard." This season I find bees busy on the few plants I possess, after white clover and heather have ceased to yield. During any rare hour of bright sunshine every flower allures a bee, and the visits are so oft recurrent that the plant must yield bountifully and secrete quickly.

The Elusiveness of Young Queens.—On examining a hive for a queen, one is generally satisfied of her presence when he sees brood, sealed and unsealed, in all stages, from the tiniest little worm to the larva almost filling the entire cell. Keeping a sharp look-out, further evidence is observable when we discover traces of her recent egg-laying arranged in systematic order round the already existing patches of brood; and, from their appearance and position in the cell, a close observer may ascertain if they have been deposited a day or two or just previous to his inspection of the comb. So the search can be carried on on that particular or adjacent frame if the eggs show that they have been recently deposited. Her graceful form and leisurely movements, once seen, mark her out clearly from the "vulgar throng" of busy workers or bulky drones by which she is surrounded, so that her presence is easily detected unless the hive is uncommonly populous, or the bees have been set on the run by rough handling of the hive or frames or the too profuse use of smoke. It may be taken as an axiom that the less smoke we use the more certain we are to find the queen. But all this is true only of staid, sedate, and matronly mothers who have been fertilised for some time, and who have settled down to their life's work. At times young virgin queens are very hard to find, and one is often apt to come to the erroneous conclusion that there is no queen present owing to her movements being so elusive. She takes advantage of all manner of subterfuges to elude the keen eye of the searcher, and with such success that too often the introduction of a purchased queen proves unsuccessful. The bees know she is there, and, being their very own they cling to her to the detriment, or even extinction, of the stock, in preference to accepting the presidency of an alien, however valuable she may be. This is one of the enigmas of bee-life which at times tend to shake our faith in the wisdom, or almost preternatural instinct, which is one of the marvels of the hive. I had, during the past summer, an illustration of this strangely elusive power of a young drone-breeding queen. Uncontrovertible evidence was abundantly present of her presence in the hive. The dome-shaped capping of brood in worker cells, the irregular distribution of larvæ in patches here and there or in isolated cells, the indiscriminate way in which the eggs were deposited, the presence in cells of more than one egg, all testified not only that there was a queen present in the hive, but afforded proof positive that she had, owing to our wintry summer, failed to meet the drone. Yet the frames were all twice carefully handled without any signs of her bodily presence being observable. Next day another rigid inspection took place, and every frame was examined in a cool and deliberate fashion, but she again successfully eluded observation, and it was only after another examination had been begun that she was seen hurrying along the floorboard to gain a footing on the frame last replaced. Once seen, I kept her under close surveillance to test the cause of her elusiveness, and found that time after time she was temporarily able to elude observation by swiftly darting through pop-holes, rushing round the ends or bottom of the frames, taking advantage of irregularly-built comb, or hiding wherever any "bunching" of bees took place at the uncapped honey cells, and, once at least, *flying* from the frame under observation to one already in the hive. Altogether, her powers

of elusion were truly marvellous, and, after observing them carefully for some time, it would in no way surprise me though frequently the search for a virgin queen were given up under the mistaken impression that no such presided in the hive about to be re-queened. I have lately, in communications from various correspondents, observed problems propounded which were easily solved when we recognise the almost magical powers of elusion possessed by these young virgin queens.—D. M. M., *Banff.*

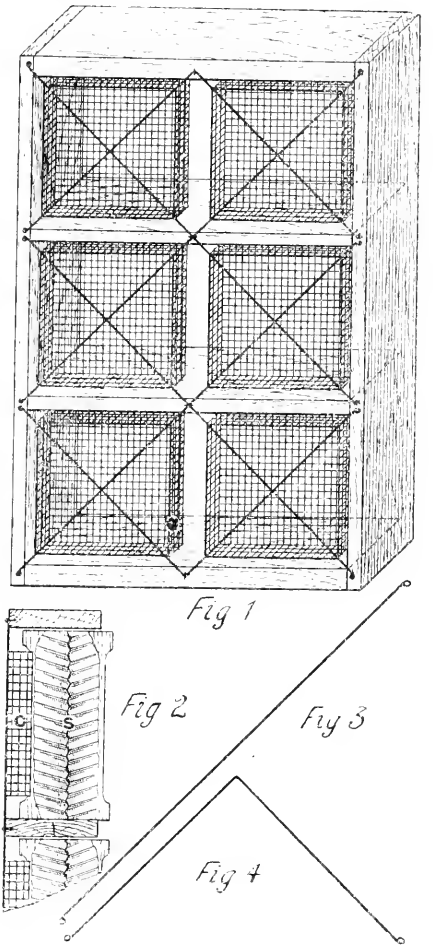
THE SEASON IN NORTHANTS.

A REMARKABLE REPORT FOR 1902.

[4911.] Not often seeing any account in the B.B.J. as to bee-keeping in this part, it may interest some readers to know how bees have got on in Northants. The spring being cold and wet, bees required a lot of care to get them along at all. It was feed, feed, up to mid-June. We then had a turn for the better, and we had a regular "Coronation" bee-time; in fact, what with swarms and honey-extracting, it was the liveliest time I have ever had in all my sixteen years' bee-keeping. Fortunately I had got my bees up to "concert pitch," and the honey fairly rolled in. Never before have I known the bees to gather so fast as then. We had to literally extract morning and night for a few days to give room for storing. It really seemed as though the bees worked night and day. The result is that 1902 is the best season I have had for many years. With regard to quality, the honey varied from rather dark to medium, but good, while some was splendid, fit to put before any one. With regard to sales, I have disposed of a good deal, but prices seem to get a little lower as time goes on even in a year like this. I have a fair quantity on hand yet, but it keeps going. If I am not cleared out by Christmas I must advertise in the B.B.J., and I don't think it will be much trouble to get rid of it. How very generous some buyers are who advertise in the B.B.J. in this year of honey scarcity! Fancy 6s. per dozen offered for *best sections*, and 5¾d. per lb. for *best extracted* (*vide* last week's B.B.J.). I hope these prices will not tempt producers to part with good honey at such prices in a year of honey-famine, as we are told this is. Anyway, those of us who have done so well this year can sympathise with members of the craft who have had nothing but disappointments for their year's work.—CHAS. WELLS, *Oxendon, Market Harboro', October* 6.

SECTION EXTRACTING.

[4912.] In reply to the remark of Mr. Woodley in B.B.J. of September 11 (page 365), I enclose sketch of my section-extracting cages, made according to Cheshire's book. Two are needed to balance the extractor. They are, as shown by fig. 1, like miniature bookshelves, 2 in. deep the sides and the two shelves being made of ⅜-in. yellow pine, whilst the top and bottom are made of ½-in. stuff. Of course, tin could be used with advantage, but with this the cages would not be so simple to make. Attached to the front of each cage is a lattice-work of supporting wires carrying six tinned wire-cloth guards, in length and width ½ in. less each way than that of the kind of section used, and with their sides bent up to a depth of ½ in. They are soldered—raw



SECTION-EXTRACTING CAGE.

edge outwards—at the corners to the $\frac{1}{16}$-in. thick tinned cross wires; four of these are straight and two bent, as shown by figs. 3 and 4, and they are attached to the frame with small staples or tinned tacks, the ends that meet being side by side, so as to lie flat. Fig. 2, which is a part section through one of the cages, shows how the sections (S) are stood upon the shelves, with the comb-surface bearing up against the wire-cloth (C). The size of the

frame depends on kind of section used. Place two together, measure across both each way, and add ⅛ in. to each measurement, and that is the space to allow inside each division. In making be careful not to make the cage too large to go into your extractor. Mine is a "Raynor," geared, with chain, and I use it at full speed. In reply to your correspondent, "Devereux" (page 367), I would say that I only use them with delicate combs, as I now use hanging section-frames, with detachable separators, and put the hangers into the extractor, just as though they were shallow-frames.—G. M. SAUNDERS, *Keswick.*

HIVING EXTRAORDINARY.

A TRUE STORY.

[4913.] The following novel plan was adopted by an old skeppist, owning, at least, 170 stocks of bees :—One hot day at the end of June several swarms issued simultaneously and the bee-man had only three empty skeps, which would not hold one-half the bees. So, feeling sure that many other swarms would turn out during the day, he emptied the second lot in question into a sack and tied them up. Later the same day, as expected, many others (he could not say how many) of his numerous skeps followed suit, and the swarms were treated in the same way. Then he sent for more skeps, and ordered a long stand. When these came home a few days after, he untied the sack and laded out the bees with a hand bowl. In this way nine skeps were filled, all of which were placed on the stand. This done, he turned the sack inside out and shook it! "Now, guv'ner" (he said, when I called a few days ago), "how is it them bees wouldn't bide? Every blessed skep was empty within a week. I *knows* there was £10 worth of bees went away." Then he added, "It's the wust season I ever knowed—stifled fifty lots an' only got 7 cwt. of honey."—A COUNTRY PARSON, *October* 1.

TWO QUEENS IN A HIVE.

[4914.] The above subject always seems to possess interest for your numerous bee-keeping readers, and I therefore send you the following particulars that have come under my own immediate notice: On the 7th inst. I had the pleasure of a visit from our county expert, who, upon overhauling the combs of one of my hives, expressed the opinion that there were two queens in it. He arrived at this conclusion on finding two distinct and separate lots of brood on separate combs. The first batch was seen to be compactly laid in the second frame from the entrance (the frames hang parallel with the hive front), then followed two frames devoid of brood, and on lifting the fifth frame from doorway of hive we came across another lot of brood like the first, thus giving two empty frames right in the centre of brood-nest. I had united three driven lots of bees about three weeks ago and liberally fed them with syrup in the usual way. On examining the ground round the hive next morning after the expert's visit, I found the bees carrying in pollen freely, but a dead queen had been thrown out of the hive we had been examining the day before, thus proving the expert's view that two queens were in the hive at the time. The bees had evidently settled down for winter with two laying queens, but being disturbed by the examination the rival queens had met, with the result of "survival of the fittest." I will send photo of my apiary for "Homes of the Honey Bee" for our journals if you can find room for it.—THOS. WELLS, *Colchester, October* 11.

FACTS ABOUT FOUL BROOD.

[4915.] Last season I reported a case of a swarm taking possession of a hive which had died of foul brood two years previously, this swarm taking possession of the old comb, and the swarm only showing some so-called chilled brood, no foul. You omitted this in my report in B.J. Perhaps you were justified in doing so. But facts are facts, all the same. This hive is still in existence, and was very strong this last spring, with no signs of foul brood whatever, or chilled either, and, if the season had been good, would have given good results. As it is, I took twelve sections of honey from it, and after that eight sections and a frame of honey (the best) was removed, leaving the stock very scantily provisioned. This hive belongs to a gentleman at Harrogate, and can be examined by any expert.—G. D., *Yorks, October* 2.

FOUL BROOD LEGISLATION.

[4916.] Through the medium of your journal I should like to call attention to the above subject before the forthcoming General Election. Would it not be advisable for all secretaries, as well as the local secretaries of the associations, to petition all candidates on the subject? I think if they were well supported by members of the different associations that "little insignificant party" would make its voice heard. Trusting that an abler pen than mine will take up this most important subject,—WM. LLOYD, *Lancaster.*

SOME EAST KENT NOTES.

[4917.] Having finished bee-work for another season and got all my stocks packed down for winter, I am sending along a few notes on the year's results.

Although the spring and summer were generally so wet and cold, 1902 must be put down as a real "Coronation year" with me—a

record year both as regards honey secured and cash realised from the sale of the products of the busy bee. Unlike many of your correspondents who have secured but little surplus, my stocks have yielded an average of fully 50 lb. per hive, and a profit of about £1 4s. each colony. My "Ford-Wells" hive did well, and again stood at the head of the poll, giving me five dozen shallow-frames of honey; thus, although some of the single hives yielded a good surplus, the double-colony hive was equal to two of the best.

It must be very discouraging to bee-keepers, after doing their best to get stocks into strong condition all ready for field work, to have their efforts frustrated by adverse weather; and when an apiarist of the ability of "D. M. M." states in September *Record* that "up to date not one single ounce of honey has been consigned to the supers in an apiary of over twenty colonies," I think all bee-keepers will wish with him in his concluding paragraph "that it may be fifty years before we have another season like 1902."

During my seven summers' bee-keeping I have never known queens to cease laying so early as this year, for when examining my stocks the latter part of September to see how they stood for winter stores I was surprised to find so little brood; indeed, in a couple of my hives there were no eggs at all. I made sure the stocks were not queenless by hunting up the queens in each case. It was very satisfactory, however, to find a good supply of natural stores, so that with a good honey harvest and a large number of frames of comb drawn out ready for next year (a very valuable asset) I have every reason to be satisfied with the season's results.

Selling Honey.—No doubt the scarcity of honey has greatly facilitated the disposing of the year's crop, and judging from the B.B.J. advertisement columns honey is still wanted. For my own part, I have sold right out, and have only three pots left for my own use. Apart from supplying honey wholesale to shopkeepers, which realised me 8s. per doz., I invested in one of Abbott Bros.' honey show-cases, advertised in B.J. about two years ago—a really well-made article, of excellent design—in which I put half a dozen bottles of honey, and hung it up on the wall outside my house; and this, along with one of Geo. Rose's labels, "Honey from our own bees," resulted in the sale of about seventy 1-lb bottles at 10d. per lb.—ARTHUR H. HOMERSHAM, *Sturry, near Canterbury, October* 13.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of September, 1902, was £803.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Queries and Replies.

[2983.] *Feeding Bees Returned from the Moors.*—I brought my bees back from the moors on October 4, and I find that they have not nearly enough food in the brood chamber to last through the winter. Is it too late to start syrup feeding, or would it be safer to give them soft candy only? I ask this question as everything has been so late this year that I thought there might still be time to start feeding them with syrup. I shall be glad to hear as soon as convenient, as the time is now getting very short before bees cease flying.—H. E. BECKETT, *Sheffield, October* 11.

REPLY.—We advise crowding the bees on to as many combs as they can cover thickly, and giving ten to fifteen pounds of thick, well-made syrup food in a rapid feeder, holding the food in about twice filling. Give the syrup warm, and put on plenty of warm coverings to induce the bees to seal the food over. Do not be afraid of crowding the bees on to four or five combs. After food mentioned has been taken down, put on a 4 lb. cake of candy.

[2984.] *Clearing Bees from Sections.*—1. On attempting to drive bees by rapping and smoking out of a skep containing honey and brood into the entrance of a frame hive (over which the hive had been placed as a super), many of the bees remained in the skep, even after ten minutes' rapping. What ought I to have done to get them out? Would a bee escape have cleared them out, as there was a little brood still to hatch out? 2. When you take off a rack of shallow frames or sections, how do you drive the bees out? Must the frames and sections be taken out singly, and the bees brushed off? If the bees are unduly disturbed they spoil the comb for show purposes.—OLIVER MOURANT, *Jersey, October* 1.

REPLY.—1. The bees should have been driven into an empty skep, then thrown down from the latter in front of the frame-hive and allowed to run in. 2. The use of a super-clearer effectually prevents any damage to cappings of combs. If no super-clearer is available there is no other way but brushing off the bees as stated.

[2985.] *Suspected Loss of Queen.*—I recently noticed several drones flying outside one of my hives which I have packed down for the winter, and as these are allowed free entrance in their own home, but promptly collared by the bees of any other hive they try to enter, I fear that this stock is either queenless or has had its queen damaged in its return from the heather. Would you kindly tell me if it would be wise to re-queen now or to wait till March. In either case I shall have to purchase a queen.—BEEIST, *Darwen, October* 13.

REPLY.—If the queen is really missing, by far the best course will be to re-queen at

once. Bees left queenless all winter will become more or less demoralised, as it were, by next spring, and thus lose half the advantage of re-queening, besides the increased risk of their refusing to accept an alien queen.

Echoes from the Hives.

Winchester, Hants, October 11.—The bee-season has not been a good one down here. My best stock gave me thirty-one well-filled sections, and 15 lb. of extracted honey, but my other hives only averaged twenty-one well-filled sections each. I have not had a single swarm this year from my own hives, but I found two vagrant ones, and my father gave me a very strong swarm weighing about 9 lb. The latter very soon filled a ten-frame hive with combs, and wonld no doubt have given some surplus but for the poor season. I might say what I know about bees I learnt from the B.B.J. and *Record*, along with the "Guide Book."—G. H. C.

NORTHUMBERLAND AND DURHAM B.K.A.

Owing to the season of 1902 being so very unfavourable for honey-gathering, the Committee of the above Association decided to cancel their honey show for the year. A meeting of members and friends was held in the Y.M.C.A., Newcastle, on Saturday, October 4, and was well attended by members from all parts of the two counties, many having travelled long distances to be present.

J. J. Weighill, Esq., Stocksfield, occupied the chair, and in his opening remarks he said that they were gathered together under very different circumstances to that of the previous year, which had been so remarkable for the excellence of the display at their show. He was pleased to notice that some heather honey had been got this year by the beautiful, well-finished super which had been brought by their secretary, whom they all looked upon as an authority on honey-production. He was glad that Mr. Waddell advocated showing honey, as it was the means of keeping their Association's produce well before the public, specially so when his exhibits usually figured amongst the prize-winners.

Messrs. Burkill, Johnstone, Armstrong, Gardener, Rochester, Scougall, Peacock, Garnett, Robinson, and others all spoke of this being a remarkably poor season, and the worst since that of 1888.

The secretary (Mr. Waddell) gave a special report of his tour through the two counties on expert work. He had been very kindly received, and made welcome by every bee-keeper visited, and in many instances had rendered great assistance by locating foul brood in hives and districts where it was never even suspected. He had travelled some 700 miles on his bicycle, and visited about 350 bee-keepers, owning some 2,500 hives.

A hearty vote of thanks from the Association was accorded to the Northumberland County Council for their grant in aid for expert work. It was also resolved that a deputation be formed to wait upon the Durham County Council with a request that the sphere of work in the county be extended so as to enable them to locate and deal with foul brood among bees.

Mr. Peacock, Darlington, exhibited special entrances and alighting boards for hive-fronts for transit to the moors.

Various other subjects were discussed and dealt with.

An address on "Section Honey for Exhibition" was given by Mr. Jas. Waddell, in which he dwelt on the absolute necessity of presenting everything neat and clean. He also explained how to prepare honey for exhibition and marketing by grading, glassing, and packing for transit in view of his audience.

A pleasant meeting closed with the usual votes of thanks.

A committee meeting was held at the close, and a deputation of gentlemen was formed to wait upon the Durham C.C.—(*Communicated.*)

BEE-KEEPING IN IRELAND.

The inquiries made in the preceding fifteen years relative to the extent to which bee-keeping is followed in Ireland were repeated in 1901 by the Department of Agriculture and Technical Instruction. According to the returns received, there would appear to have been a decrease of 16·4 per cent. in the quantity of honey produced in 1900 as compared with the preceding year, the returns for which showed an increase of 41·7 per cent. as compared with the quantity in 1898. The quantity of honey produced, according to the returns, was 623,559 lb.; of this 143,368 lb. were produced in the province of Leinster, 211,821 lb. in Munster, 155,962 lb. in Ulster, and 112,408 lb. in Connaught. Of the 623,559 lb., 403,207 lb. were produced "in hives having movable combs," and 220,352 lb. "in other hives." It was stated that 260,074 lb. was "run honey," and 363,485 lb. "section honey." The number of stocks bought through the winter of 1900-1901 amounted to 33,171, of which 16,754 were in hives having movable combs, and 16,417 in other hives. According to the returns collected, there were 6,743 lb. of wax manufactured in 1900, of which 3,394 lb. were from hives having movable combs, and 3,349 lb. from other hives. The returns received in 1900 gave the number of swarms at work during the season of 1899 as 23,981; the quantity of honey was 745,692 lb. The number of stocks brought through the

winter of 1899-1900 as 31,045; and the quantity of wax manufactured in 1899 as 4,873 lb.—*Commerce, July* 30.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** Mr. J. J. Alsford (Blandford) asks us to say that he has had a postcard—on a business matter—from Mr. J. F. Spencer, who sends no address, so that he cannot reply thereto.

A. HALL (Blackpool).—*Reliability of Advertisers.*—We can personally vouch for the reliability and character for fair dealing of the advertiser whose name you give. There must, we feel sure, be some good reason for the delay of which you complain. Write again, and mention what we have stated above.

H. D. (Sutton Coldfield).—*Buying on Deposit System.*—We could not undertake the task of adjudicating between buyer and seller on the value of goods purchased on the "deposit system." All we can do is hold the cash till both parties agree to terms. If they fail in this, the money is returned to sender after deducting the few coppers charged for commission.

G. H. C. (Winchester).—*Insect Nomenclature.*—The insect sent is not "a queen-wasp," or a wasp at all, as supposed, but a fine hornet.

E. F. GLASS (Bath).—*Joining County B.K. Association.*—Mr. Jas. Brown, Bridge-street, Bristol, Hon. Sec. Bristol and District B.K.A., will, if written to, inform you with regard to membership.

"G." (Leicestershire).—*Moving Hives to Bee-house.*—1. The hives, intended for removal into your new bee-house, should be allowed to remain on their present stands until cold weather has kept the bees indoors for several weeks. It would assuredly cause loss of bees to move them into the house "a few yards away" unless this precaution is taken. 2. The bees sent are a cross between the Carniolan and the ordinary brown bee.

C. H. P. (Preston).—*French Bee Journal.*—A suitable paper for your purpose is the *Revue Internationale*, edited by M. Edouard Bertrand, Nyon, Switzerland.

AMATEUR (Delabole, Cornwall).—*Wintering Bees.*—The best advice we can give to any one starting bee-keeping is to invest in a copy of the "Guide Book," where a whole chapter is devoted to "Wintering Bees." We say this, first, because we could not give full details in this column, and, second, because you will soon want information on "Spring Management," and so on, as the season for work arrives, all of which subjects can only be dealt with in a text-book.

C. M. (Aberdare).—*Qualifying as a "Bee-Expert."*—1. For information with regard to examinations for experts' certificates applications must be made to the Secretary of the British Bee-keepers' Association, 12, Hanover-square, London. 2. Duly qualified persons are employed in various ways by county bee-keepers' associations, and also by County Councils in giving instruction on bee-keeping, but we cannot very well take upon ourselves to say what your personal chances are of obtaining such employment.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

TROLLOPE (Cumberland).—No. 1 sample shows foul brood in the incipient stage. We should judge it to be only a recent outbreak, unless other combs may point to a different conclusion. No. 2 has no brood at all in comb, save in two cells, which contain sealed drone-brood in worker-cells, thus showing that, as suspected, the young queen has not mated.

J. B. M. (Yorks).—Your sample shows a bad case of foul brood of old standing. It would be a waste of time and labour to try and winter the stock as proposed. Our advice is to burn the whole contents of the hive without delay. The safety of your healthy stocks alone should render drastic measures imperative. Bear in mind that naphthaline has no effect on the spores of foul brood, and the hive in question must be literally teeming with these.

R. Y. (Dumfriesshire).—There is decided foul brood in the hive, and we advise dealing with it as recommended above to "J. B. M.," though your case is not quite so bad. With fourteen hives alongside the one affected, you should run no risks.

NOVICE (Stourbridge). — Comb contains nothing worse than "chilled" brood; no disease at all.

*** *Several letters and replies to queries are in type, and will appear in our next issue.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONFERENCE OF COUNTY REPRESENTATIVES.

(*Continued from page* 414.)

The Chairman then opened the discussion of item No. 3 on the agenda, viz. :—"The drawing up of a uniform set of instructions for the use of experts when visiting members' apiaries, &c."

Colonel Walker thought it would be advantageous to carry out this proposal. One of the great difficulties in getting experts to do their work properly was the objection that prevailed among some bee-keepers against having their apiaries visited at all because of the fear of infection. It was exceedingly necessary that there should be no risk of that evil, and almost as much so that there should even be no suspicion of it. It was difficult to eradicate the notion in the minds of some people that the expert's visit was liable to do more harm than good. He produced a form, drawn up very carefully, which had been sent round with the Devon experts, and something of that pattern might be agreed on. It would be far better if all adopted the same plan, even in the matter of disinfectants used for the person and the hive. Carbolic acid was disagreeable to handle, but there were many disinfectants quite as effective and without any disadvantage. In Devon they used, on the advice of an eminent chemist, perchloride of mercury. One of the tabloids he exhibited dissolved in a pint of water was supposed to kill all spores, and twice that strength destroy all spores in less than a minute. There was no evil smell with the preparation.

Mr. Reid endorsed Colonel Walker's statement that perchloride of mercury, being one of the most powerful poisons known, was a germicide. Its deadly character was one reason why it must be used only by responsible people and with extreme care, lest the minutest quantity should get into the honey. Carbolic acid was not effective, but the vapour of sulphur absolutely sterilised everything, if enough were administered. Phormol would also serve, but again the difficulty was that these were deadly poisons. There should undoubtedly be a standard set of rules for experts, because then all the members of Associations throughout the country would not be able to grumble that the expert does not do this or that, &c., and he thought the B.B.K.A. could do nothing better than draft such a set of rules for general use.

The Chairman said that if the affiliated Associations would send him their instructions which they issued to their experts he would collate them, and bring the matter before the Council, with a view to the drafting of a set of instructions that would be suitable for all.

Mr. Reid said that in Surrey they had a complete system of statistics devised by Mr. White, the indefatigable secretary. One of the experts' duties was to post the forms filled up after having visited the members. He did not consider it practicable to obtain from bee-keepers particulars as to the amount of honey produced, nor did he believe the information would be of much value. The quantity gathered in Great Britain this year would not compare with last year's crop, and a similar divergence might be expected from time to time. The Surrey Association's statistics were only collected from members. He was sure Mr. White would gladly place the forms used at the disposal of the B.B.K.A. (Mr. Young, the secretary, intimated that he already had copies of the form in question from Surrey and other counties.) The particulars obtained referred to the number of skeps, bar-framed hives, and the prevalence of foul brood. If a county association had any importance at all its principal object must be to check and stamp out foul brood. He thought it was useless to look forward to legislation on that subject. In Surrey they had reduced it enormously by going round to every bee-keeper who was suspected of harbouring the disease. He thought it very desirable that county secretaries should obtain statistics on this point, and furnish the same to the parent body.

Colonel Walker suggested that the Council of the B.B.K.A. should, with the aid of the forms sent up as patterns, decide on the form they would recommend to be adopted.

The Secretary said it was hoped that the Minister of Agriculture would be present the next day at the Dairy Show, when perhaps the Chairman's attendance to explain anything in connection with the honey department might be of advantage to the industry. The Chairman gladly assented.

Mr. Meadows said it was taken for granted that every county had a *certificated* expert. That was not the case in Leicestershire, and he believed the same applied to other associations. His county was badly off for experts, and if the B.B.K.A. could induce duly qualified men to come from other counties and be available for expert work, they would be doing a vast amount of good. The local association had an energetic secretary, but unfortunately he could not spare the necessary time to work up the county, and this drawback, coupled with the indifferent expert service, rendered their position unsatisfactory. He also thought it was a pity that some scheme could not be found for partially remunerating secretaries, who could then devote more time to the work, and that the strong counties could not come to the help of the weak ones.

Referring to the use of perchloride of mercury Mr. Carr stated that on one occasion, some years ago, when holding an examination

of candidates for expert's certificates, he had with him samples of diseased comb which he thought it might be useful for all examiners to take with them for the purpose of testing the knowledge of candidates. With regard to foul brood, he also had tabloids similar to those now before them with him. Any one who touched the samples of diseased comb had to wash his hands in the solution prepared as Colonel Walker stated. But the danger of germicides which are deadly poisons, in unskilled hands led him to give up the idea of using perchloride of mercury in the way he had intended. Nevertheless he hoped that the remedy was as satisfactory as claimed.

Colonel Walker did not propose to cleanse a hive with the disinfectant, but only to provide something that was not offensive, and with which the expert could disinfect himself, and thus prevent the spread of disease. Every medical man carried out, or was supposed to, a precaution of this character.

Mr. Reid said that perchloride of mercury would destroy the spores in a hive if it could be brought into direct contact with the germs, but these were often concealed in pieces of propolis or wax, and, consequently, evaded contact. Whatever remedy was used whether sulphuring, heating, washing inside or out, they were all, more or less, uncertain, and he advocated burning the hive.

The Chairman promised to bear in mind the points raised when the whole subject came forward for discussion at an early meeting of the Council.

The Chairman, in reference to subject No. 4 on the agenda, "Consideration of Other Proposals for Enhancing the Usefulness of County Associations," read a letter from a gentleman at Burton-on-Trent, suggesting the advisability of all Associations adopting a method of stamping sections on the inside, whilst in the flat, with the Association's stamp, so as to guard against dishonest showing.

Mr. R. H. Coltman (Hon. Secretary, Derbyshire B.K.A.) exhibited some sections stamped on the inside, according to the custom in Derbyshire. Without such safeguard, he said, there was nothing to prevent persons buying sections from other apiaries and exhibiting them as their own.

The Chairman then read an extract from a letter written by the Secretary of the Northumberland and Durham B.K.A., to the effect that the B.B.K.A. would be acting wisely by issuing suggestions for the instruction of the various County Councils, many of whom, probably through ignorance, did not yet see sufficient necessity to assist the bee-keeping industry. The writer also submitted that apiculture was a means of preventing rural depopulation; also that measures should be taken in regard to foul brood, which next year would probably be accentuated owing to the recent poor season, many affected stocks having died at the moors and been robbed of all their stores.

Mr. Hill said that some years ago at the Derbyshire Show some sections were exhibited which were said to be gathered from sainfoin. He knew that the bee-keeper who showed them had no sainfoin about his locality, and, indeed, none grew in the county; and, moreover, an appliance dealer present told him (the speaker) that he had seen the same sections at the Shrewsbury Show, and gave the name of the exhibitor. He (Mr. Hill) wrote two notes to the latter, asking him questions relative to the honey referred to, but received no answer to the points raised, but merely that the bee-keeper in question never answered disappointed exhibitors. Since then some years had elapsed, and the custom of stamping sections had been adopted. A significant fact in connection therewith was that the Derbyshire bee-keeper immediately afterwards declared that he would not show any more section honey, as it did not pay. He (the speaker) believed that dishonesty was practised at most flower shows throughout the country in this respect, and that the B.B.K.A. should make an effort to prevent it, in the interests of bee-keepers generally.

The Chairman said that all who wished to show could write to their secretary and tell him so. There would only be a few men competent to win at shows.

Mr. Turner asked how the man would fare who had 600 or more sections to stamp, because he would have to stamp all, not knowing which particular sections would turn out fit for show purposes. Besides, the system of stamping would not prevent fraud, seeing that stamped sections could easily be bought.

Mr. Sharp and others joined in the debate, the members being generally of opinion that the stamp might be borrowed, or sections sent to be stamped.

The Chairman read portions of a letter from a gentleman at Bristol who recommended that the B.B.K.A. should issue leaflets stating its aims and objects and all the latest and best ideas in nutshell form, which could be forwarded to local secretaries, and sent out by them in the annual reports; that the parent Society should supply affiliated societies with medals at cost price. He further stated that he had had to write about forty letters to effect a few insurances, and asked why hon. secretaries should have to do such extra work and pay postages for no advantage to their own associations? Commenting on this, the Chairman said that when a hitch took place in the negotiations regarding the insurance scheme of the B.B.K.A., the Bristol Association became impatient, and, he was told, had started an insurance plan of its own. Now, however, all difficulties had been removed in the former case, and over 5,000 hives had already been insured, and premiums paid in small sums to the extent of £25. The affiliated societies had handed in £9 4s. 10d., and in addition £16 1s. 11d.

had been received at the office of the B.B.K.A. He thought no one could object to pay one penny per hive, and if it was not done through the affiliated associations the work could not be properly carried out. Every person who did not belong to an association, but nevertheless wished to be included in the B.B.K.A. list of insurers, paid an extra 6d. Secretaries, by helping in this business, enabled members to effect their insurance at 6d. less than they otherwise could. He hoped local secretaries and experts would do their best to push forward this insurance boon, and enable the Company better to cover its risks. In reply to Colonel Walker, he added that no insurances could be sent in after October 1.

Mr. Reid strongly advocated solidarity in reference to the insurance scheme. He hoped and expected that next year the members would be doubled.

Mr. Pugh hoped this meeting was the precursor of many others of a similar character, which could not fail to enlighten bee-keepers and advance their industry. He also trusted that the parent body would make the county representatives feel that their attendance was appreciated, and would send them the agenda and other papers from time to time.

After a few words from the Secretary, Mr. Reid, and Mr. Meadows on the same subject, Colonel Walker inquired whether any of the counties paid the expenses of their representatives' attendance.

The Rev. Mr. Burkitt replied that Wilts paid out-of-pocket expenses; Mr. Meadows, that Leicester contributed not a penny; Mr. Pugh, that Notts allowed 10s. (about half the train fare to London); the Berks delegate, that his county paid expenses if the representative required it.

The Lincolnshire delegate suggested that this meeting in future be held at the Royal Show; but the Chairman held that the Council must decide that question.

Mr. Reid thanked the county visitors for their suggestions, which would always be warmly welcomed and considered by the Council of the B.B.K.A.

A word of thanks to Colonel Walker for initiating the meeting brought the conference to a close.

The report of Conversazione which followed the Conference will appear next week.

PROKOPÒVITSH.

A PIONEER IN SUPERING.

By Lieut.-Col. H. J. O. Walker.

In all probability the name of the Russian bee-master whose hive I have to describe is familiar to but few of the readers of this journal, most of whom will be surprised to see how closely the shallow-frames or sections, for I hardly know which to term them, devised by Prokopòvitsh in the first half of the nineteenth century resemble those in use at the present time. The description and illustrations now produced are taken from a little treatise published in Paris in 1841, itself a translation from the Russian of an earlier edition.

After having served in a Hussar regiment, Prokopòvitsh settled down to study bee-keeping, and having worked out a system, he established a school of apiculture in the village of Paltshiky, where in a "vast garden" stocked with 2,800 hives he taught his craft to students, whose number was never less than eighty, and who came to him from all parts of Russia for a two years' course. His fees were small, his teaching practical, and his hives of a strong and simple construction. Movable boxes had been advocated for many years, both as tiered vertically and as worked on a system of horizontal expansion; they must have been well known to Prokopòvitsh. He, however, retained the long, upright, one-piece hive commonly used in Russia and Poland, arranging it in such a way that it could be used according to both methods, and at the same time would admit of a systematic removal of the wax before it had become too old to find a ready market, a point of importance in days when wax was so valuable.

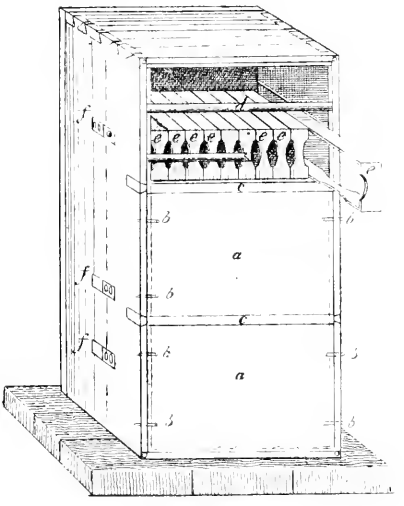


Fig. 1.

In fig. 1, we see the hive facing us in perspective; an oblong box 3 ft. 6 in. high, 14 in. to 22 in. wide, and 12 in. to 16 in. deep as might be preferred. The front is formed of three shutters of equal size and removable; the two upper resting on 1 in. strips (*c*) let into each side of the hive, and all three fitting into rebates and securable by pins (*b*). The hive could be divided into compartments by boards that in front rested on the strips and must have been otherwise supported internally. With the view of preventing the bees

from extending their combs to the shutters two bars or rods (*d*) were let into the sides of the hive, a little inside the shutters. On one side of the hive there were three doors (*f*); the middle door exactly in the middle of the side, the upper door 1 in. above the level of the upper dividing strip, and the lower one 1 in. below the lower strip.*

The ordinary working of the hive is not properly described, but would seem to have been as follows:—A swarm, having been introduced, would establish itself in the top of the hive and work downwards. In due course, perhaps the following year, the brood-nest would be opposite to the middle shutter, and the combs in the top of the hive would hold the honey. The top shutter removed, these would be cut out by the bee-master. The following year he would clear out the middle compartment, and then turn the hive upside down, so that the bees would reverse their operations and again work downwards into the middle compartment, and the next take would be from the originally lowest end of the hive, now the uppermost. In this way, as already mentioned, the wax would always be fresh, and the honey that of the current year's storing. There was nothing very original so far, except the inversion of the hive; the general working was that in practice in Russia and Poland. It is suggested in the treatise that the hive could be worked horizontally for honey or for artificial swarms. This might have been done by means of dividing-boards with sliding doors, the swarm being first established in the middle compartment, but there would have been difficulties.

We come now to the peculiar invention that distinguishes Prokopòvitsh; and to appreciate its merit we should bear in mind that at the time when he took to apiculture there had been no frames used except those that composed the leaf-hive of Huber, from whom Prokopòvitsh perhaps derived his inspiration. It was his ambition to obtain pure honey gathered entirely from one source, such honey as could only be secured by storage in fresh-built combs in compartments of restricted size; and having noticed that under ordinary circumstances the mother-bee never leaves the brood-combs, so that any sensible gap between

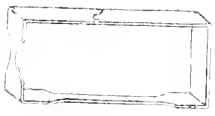


Fig. 2.

these and other combs built in the hive would probably exclude her, he was led to adopt the little frames shown in figs. 1 and 2. They were made of very thin wood, and were as long as the hive was deep; their height was about half their length, and their breadth not more than 1½ in. The figure frame is about 12 in. by 6 in. The bottom bars were hollowed out for a bee passage, and the side bars next to the shutters were similarly treated, to admit of observation.

The working when these frames were used was as follows. After taking the honey in the autumn from either the top or the middle compartment, a slotted board (fig. 3) was placed over the brood combs, and over this

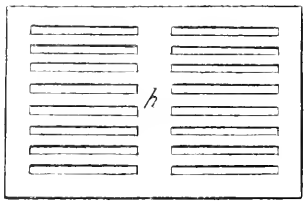


Fig. 3.

again a plain board for wintering. Next summer, in a suitable honey-flow, the latter was removed; and a set of frames, to each of which a strip of comb had been attached as a guide, was placed upon the slotted board, so that the bees could go above and store the super. It is not distinctly stated that two tiers of frames were ever used. If they were, the communication must have been along the front, as the top bars had no bee-space; there was a little play between the frames, but probably not enough for a bee to pass.

Thus, in one great step, Prokopòvitsh attained to the pure comb super-honey of our own day, and it is said that the stored frames were sent long distances without injury. The slotted board was in itself a useful invention, one that has been since revived and brought out with no small flourish. It has been sometimes assumed that frames were used throughout this hive; but I cannot find it so in the treatise, and, moreover, such a course would have been very inconvenient, and contrary to the principles of the inventor. Ingenious as the hive was, it could not be expected to survive the introduction of movable bar-frames: its popularity would have been very brief if used in the way suggested.

The only honey plant recommended by Prokopòvitsh for culture was *Echium vulgare*, known to us as viper's bugloss, but less common in these islands as a wild plant than on the Continent. The type of the family to which it belongs is our garden borage.—*Budleigh Salterton, South Devon, October* 20.

* The middle door is wrongly placed in the figure here reproduced from the pamphlet.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

*** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4918] To the negligent one in bee-work we say again, "What you have to do amongst your bees do quickly"; if feeding has been neglected give good thick syrup lukewarm, and wrap up the feeder to keep it warm as long as possible.

If a stock requires, say, 10 lb. of food, give 5 or 6 lb. of syrup and then a large cake of soft candy (weighing 3 or 4 lb.). When all the feeding has been completed, do not forget the winter passages; these are very easily provided. Split up a piece of an old broken box—or ½-in. board—into strips 6 in. or 7 in. long, and cut the ends to a wedge shape; two or three of these strips can be laid flat on the top of frames over the cluster of bees, and the quilt rolled back before a bee has had time to take wing. This simple device answers every requirement in giving the bees access to the stores in frames beyond their reach when extreme weather prevails for a long period, and when removed the following spring they can be burnt out of the way. Whenever quilts are torn off the frames late in the season care should be taken in replacing them, so that there is no current of air allowed to pass through the brood nest. A warm flat-iron will make a good job of the quilt fixing, but let it be an old one, not used in the laundry or kitchen.

Price of Honey in Sections.—I notice our Devonshire friend, Mr. Godsland (4906, page 402), refers to the low price offered for sections by an advertiser in the B.J. Without proposing to arbitrate as to the low offer, or the light weight and dark colour of many sections on the market, but from facts within my personal knowledge, the price offered is as much as the goods were worth. I am not referring to any purchases made by myself—up to the present moment I have not purchased this year a single section or a single pound of extracted honey—but in talking over the matter with others who have purchased sections they aver, and I myself know, that there is—as we say in trade—"very little in the honey trade at that price." We will take the matter thusly:—The purchaser sends spring crates in which to pack the honey—item No. 1. The goods arrive, and in looking over the cases we find (spring crates notwithstanding) there are quite a dozen of the little lumps of honey detached from the sections. These have to be strained; result 6 lb. to 7 lb. of honey instead of 12 lb. That is item No. 2. Then the parcel has to be graded, and we only get, say, half of them, worth, in the market, 9s. or 9s. 6d. when put either into glazed section-boxes or glazed—the other half have again to be run through, and we find some are worth 8s. per dozen and the rest 7s., and so to hide their imperfections we cover up rather wide on the face of the glass—the result is that, after all this trouble and labour has been expended, we are some few shillings to the good, and possibly have to wait till after next Christmas before the money returns. Of course, if one bee-keeper purchases the produce of another at sixpence and sells at a shilling, that is taking unfair advantage of his brother in the craft. But if a purchaser takes all the sections a bee-keeper produces at sixpence each, and also takes all the risks of marketing the produce and to sell again wholesale, I contend, that unless the whole lot is of exceptionable quality, the price mentioned is a fair one; the labourer is worthy of his hire, even if he is the *upper middleman*.

I am sure others besides myself will appreciate the drawing of Mr. Saunders' section-extracting cage, which illustrates very plainly the style of cage required by bee-keepers in extracting the honey from unfinished sections at the end of the ordinary honey harvest, or by those who take their bees to the moors and are glad of every bit of comb in which the bees can store the heather honey. A pair of extra "cages" could be supplied at a small increase on the prices now charged for extractors, and for those machines which have a square cage provision could be made to extract twenty-four sections at one time, and so anyone needing to do so would then be able to extract any number of unfinished ones in double quick time.—W. Woodley, *Beedon, Newbury.*

BEES IN WARWICKSHIRE.

[4919.] While the weather here in Warwickshire has apparently been very much on a par with that experienced in other districts as regards the prevalence of north-east winds and a generally low temperature, in reality, when judged by results, and from a bee-keeper's standpoint, it cannot have been so.

Certainly, the spring was inclement, which, to my mind, was not necessarily a disadvantage in a district where early surplus is never gathered, for an unrestricted brood-nest was thus provided, which, by judicious stimulative feeding, was kept filled with brood and colonies brought into excellent condition for the white clover, which seldom yields anything appreciable before the middle of June.

But from the 18th of that month until July 20 the weather was very favourable, and honey came in rapidly, mostly clover with, in

some cases, an admixture of honey from the field-bean.

The first boxes of shallow-frames were practically filled in a fortnight, and the stocks being fairly equal in strength, they were all ready for the second boxes at the same time. But here the better stocks pulled ahead somewhat, and in two instances third lots of frames were given.

The other stocks were not quite so forward with their sealing, and the addition of further storage room was therefore deferred, but I am inclined to think that a larger harvest would have been secured if I had treated all alike to a third box of frames, for while those not so treated simply completed their sealing, the other two stored between them some 37 lb. more honey and completed the sealing of the two first frames given as well.

From this you will gather that the honey was not extracted as gathered, but left to be ripened and sealed on the hives.

The limes, which usually contribute about half my crop, almost entirely failed this year. They bloomed late, and adverse weather set in when they were at their best. No honey was gathered after July 31, and all supers were removed before August 15.

A later examination showed that in some cases brood-chambers were almost destitute of food, and about 4 cwt. of syrup has had to be given.

My spring count was fourteen colonies, two of the best of which I reserved for queen-rearing. The best lot (age of queen uncertain, as she was in one of two stocks of driven bees in 1900) gave me 82 lb. (calculated after it was in the jars with the caps on). The second best, with queen of 1901, produced 75 lb. Total crop, 711 lb., also calculated when jarred off.

The two reserved lots were artificially swarmed on July 5. The two swarms yielded 25 lb. of honey, the stocks produced six young queens, five of which were successfully mated and have bred nicely in nuclei.

Driven bees have brought my present count up to twenty-three. One marked difference between the present season here and that of 1901 is the almost entire absence of brood in September, notwithstanding stimulative feeding. In September of last year several of my hives could boast of eight frames of brood, without any stimulation. Here is the fly in the ointment.

Of swarms I have no direct information, but a cast containing *two* young queens, which issued on July 30, proved indirectly that I had one, at any rate.

This cast (a large one) now covers eight frames, and on September 24 had five frames of brood.

I find driven lots when headed by young queens, most serviceable for uniting to stocks that cannot keep the pace in the spring. I unite at the beginning of June when the two lots combined have eight or more frames well filled with brood; if more than eight, the surplus brood-combs are distributed among other colonies that are not so well off.

It may interest some of your readers to know that over 500 lb. of my crop has already been disposed of at 1s. per 1-lb. bottle.

For an ordinary season there is nothing out of the ordinary in the foregoing brief record; but in such an admittedly unsatisfactory season as that just passed, I think I may consider myself fairly fortunate.—JAMES SIMKINS, *Warwickshire.*

THE SEASON IN DERBYSHIRE.

[4920.] Allow me to thank you for what knowledge of bee-keeping I possess, all received through the B.B.J., the *B.K. Record*, and the "Guide Book." I had kept bees for about twelve months before I saw inside a hive or touched a frame. The year 1902 appears to have been a bad season for honey everywhere, but for a novice it has been especially trying, seeing it has caused many a doubt and many a fear as to what is the best thing to do in a trying time, but it has yielded me many a pleasant hour notwithstanding. I had my doubts when buying, should I manage to secure healthy bees, or should I get what is to me worse than the nightmare, "foul brood"? Never having previously seen a brood-comb, I expected to find them the same colour as the new comb foundation I had bought, so when I opened the hive and found combs nearly black, I thought I was "done." My fear of the bees at first was great, but the fear of any one finding out that I really was frightened of my new "workmen" was greater, and many a time I have been complimented on my pluck in handling live bees, when all the time I was in a terrible funk. However, that trouble is over now, thank goodness.

Well, now for my results. From two stocks bought in April I have extracted 72 lb. of splendid light honey, and secured fourteen well-finished 1 lb. sections. This was gathered between June 26 and July 10, after which time the bees did not get an ounce. On August 28 we removed all unfinished sections, and extracted the contents; then we took the hives to the moors. They were in splendid condition at starting—plenty of bees and brood, but no store, so I divided the twenty-eight sections mentioned above as unfinished, and gave them the empty combs we had just extracted from, all drones having been killed off during the slack time. We left them among the heather until September 19, but it was a rough, cold, wet time, with only seven or eight days of good weather all along.

On opening we found the sections "dry as a bone," but below, in surplus-boxes, things improved, as in each hive there were eight combs for extracting nearly full, and capped half-way down. Better still, the brood-combs,

ten in each, were in the same condition, *i.e.*, capped half-way down, and a lot of unsealed honey as well, so I thought they would do without feeding, and wrapped them up for winter. This now worries me a little, so I want to ask, Will they consume the unsealed stores before it ferments, and so does them harm, or should I have fed them until they had sealed all up? The bees are very strong, and will not stand contracting on to fewer combs than at present. There were good patches of brood on three combs in one, and on four in the other, when they came from the moors, and I was surprised to find as many drones as in July, but they killed them all off in a few days after reaching home again. We are now waiting the arrival of a "honey-press," ordered some time ago (how long-winded these makers are!), so cannot say what the heather yield will be, but I think it will reach 50 lb. The two stocks have worked very evenly, and gathered pound for pound, as near as I can judge. The weather now is rough and cold, and they are not showing much, but what do come out are like millers, as white as if rolled in flour. I have also noticed them on a heap of fire-ashes, gathering the dust. Does this denote a lack of pollen?—E. H., *Chesterfield, October* 14.

[Unsealed food is usually consumed first. The bees described as "like millers" have been visiting the *Canadian balsam* for pollen. —EDS.]

THE CONFERENCE OF DELEGATES.

[4921.] Referring to your report of the above meeting in last week's BEE JOURNAL, and the opening remarks of Mr. Hill (who represented our county of Derbyshire), may I be allowed to say that, although sure that friend Hill did not mean to be unjust to our late secretary, his words are rather misleading when he says, on page 412, "We changed committees and secretaries with the object of importing new blood, but he did not discern much improvement." As a matter of fact, we changed our secretary because Mr. Walker could not on any account be induced to continue the secretaryship any longer, and resigned, much to the regret of the majority of the committee and also of the members.—J. PEARMAN, *Pennylane, Derby, October* 17.

EXPERTS AND FOUL BROOD.

[4922.] Many thanks for your information in reply to my query as to foul brood in samples of comb which I sent. I feel convinced that the outbreak is the result of my being a member of the county association. I only keep a few hives for pleasure and own consumption of honey; this being my third year's experience with bees. The hive affected was the only one examined by the expert on his visit in October last, my other two hives being away at the heather. The queen is an Italian cross, extremely prolific, but has been very troublesome this summer, owing to her offspring's bad temper. I awaited the arrival of the expert to remove her, with a view to substitute a Carniolan. Two hours were spent by the expert and myself in looking for her on the thirteen frames constituting the hive. The frames were looked over twice, shaken off and run in twice, but to no effect so far as finding of the queen was concerned. The bees were then perfectly healthy. A month later I find the comb, a sample of which I forwarded to you, and which you pronounced to contain foul brood in the incipient stage. I suspected the disease at once and took out the frame. To-day I find another frame in the same hive so affected; this I also took out and burnt, and placed naphthaline in the bottom of the hive, and shall give a cake of medicated candy and close up for the winter in the course of a day or two. My small apiary is some distance from any other bees—practically isolated, in fact; the comb in which the outbreak occurred is practically new, the hive new, and there are no bees near from which infection could have come; I myself have not been near other bees. On the other hand, foul brood is general in the county, although there are no cases within some miles of here, and the expert had been amongst it daily. No other person except myself and the expert has handled my bees in any way. Can I reasonably on this evidence come to any other conclusion than that the disease was contracted from the expert? I mean to have it out with the County Association.

The naphthaline I have is in flake form. I see it always mentioned in the JOURNAL as in balls. I have put a little on the floor of the hive, and presume this is correct, or how can I make it into balls?

The season here has been a very bad one hereabouts. Plenty of swarms, but little honey. Heather yielded better; one hive gave 27 lb. in shallow-frame supers, another nil—the queen, a young one, three weeks old when taken to the heather, not having been mated. I saw eggs from her in the hive before she went away, and thought she was all right. I send name and address, while signing myself—HERBS, *October* 20.

[Naphthaline in "flake form" is not fit for use in bee-hives.—EDS.]

FOUL BROOD LEGISLATION.

[4923.] In reply to Mr. Lloyd, who wrote on page 417 last week, I am shortly intending to do all I can to interest our M.P.s in bee-keeping, with the idea of obtaining for the County Councils a by-law enabling them to deal with "foul brood." Our County Council is a "go-ahead" one, and I can trust to its assistance in the matter, and if other county associations would do the same, something may be done, the manner of dealing with

disease to be left with the County Councils as each may think best for their county. But I would suggest that the most effective way would be through County Association experts. —G. M. SAUNDERS, Hon. Secretary Cumberland B.K.A., *October* 20.

SOME BEE NOTES FROM HERTS.

SELLING HONEY.

[4924.] I have found honey to be very scarce in and around Mid and West Herts, and the quality at the various shows where honey was exhibited may be classed as fair to good. Little can be said as to quality, nor was the general appearance what it should be to attract the attention of buyers or to stage in shop windows. I think the latter is a point that should not be overlooked, because it seems to me that the shopkeeper should be studied even before the producer. Any way, it is he that has to sell our honey, to stock it, and deal out to the consumer. This, of course, is a free country, and every one claims he can do as he likes with his own; but, as Mr. Allen Sharp says (on page 413, last week), members often under-sell each other in Hunts, as they do here in Herts. With many bee-keepers, as soon as they have secured any honey they must sell it, and, as I think, with far too little regard to price, some even carrying it round to private houses and selling it at 6d. per lb. in the summer months. I have myself seen sections for sale in shop windows at 5d. each. If spoken to about the folly of this they reply, "Better sell at that than extract it, as there is not much more than 8 oz. of honey in them." I heartily wish that there was an Association for Herts, and that Mr. Sharp's suggestion for establishing some system whereby bee-keepers could know the market value of their produce could be carried out. No doubt our Editors would afford space for reports from reliable sources, which could be published weekly, as the prices vary in different localities. For myself, I am selling in North London, St. Albans, Watford, and Hemel Hempstead — sections, 10s. 6d. per dozen, and screw-cap jars of extracted honey (country orders only), 9s. and 10s. per dozen, carriage paid. Having a very large demand for good sections, I should like to know if I am underselling any one; or is it attributable to scarcity of sections this year that the sale is so brisk? This price pays me, but that is not the point. I may say that I only deal wholesale with first-grade stuff, as I can easily retail second-grade at home. I think the grocers are selling retail at 1s. 2d. and 1s. 3d. per section in London, that being the price I get from private customers.

I trust you will agree with me, and see the need of what I request. I enclose my address, if you see fit to publish it, while signing myself,—GADE, *Herts.*

[We will be very pleased to afford the space desired for any reliable reports likely to be of service in the direction indicated, but it will obviously need some sort of co-operation on the part of bee-keepers themselves to make the idea of any real practical value as regards current prices.—EDS.]

Queries and Replies.

[2986.] *Examinations for Experts' Certificates.*—Some time ago, amongst other questions, I asked you what books you would advise me to read up, as I thought of going in for the 3rd Class Experts' Certificate, but you, apparently, missed that part of my letter, though you were good enough to answer my other queries. Could you do this in an early issue? I keep only four hives, and find that as many as I can look after properly at present. No doubt you will agree with me that there is neither pleasure nor profit in keeping more bees than you can look after properly, or, for the matter of that, anything other than bees. Some day I would like to send you a photo of my little lot. Thanking you in anticipation of your kind reply.—HARRY CLARKE, *Allesley, Coventry.*

REPLY.—1. The books recommended by the B.B.K.A. are "The British Bee-keeper's Guide Book" and "The A B C of Bee Culture," and for the higher certificates, "The Honey Bee: Its Natural History, Anatomy, and Physiology," by T. W. Cowan. 2. You are quite right on this point; a few stocks of bees, well cared for and worked on modern methods, are more satisfactory in every way, and will yield more in actual surplus honey than double the number allowed to swarm at will, and almost starve for want of food when stores run out through neglect. Glad to have photo.

[2987.] *Confining Bees to Hives.*—1. Can you tell me through the B.B.J. the cause of death of bees enclosed? I had to shift my hives a distance of about 300 yards, so I covered the entrance with perforated zinc and kept them shut in for three days. When opened yesterday I found the entrance blocked with dead bees. The frames are full of honey, so they could not have been starved. 2. Please let me know the best way to pack bar-frame hives and skeps for travelling?—F. M., *Eastbourne, October* 20.

REPLY.—1. The dead bees sent have worried themselves to death in their vain efforts to get out of the hives during their three days' confinement. The wonder is that with entrances blocked the stocks, if strong, did not perish outright. The merest tyro in bee-keeping should know that care is needed to ensure ventilation when bees are confined to their hives as stated. 2. The best advice we can give you is to invest in a "Guide Book," in which such details as you need on

bee-management are to be found. This is the only and obvious means of avoiding such mishaps as you give particulars of.

[2988.] *Spreading Disease by Want of Care.*—I come to you seeking advice about my bees. They were left till late before being fed up for winter, and when I come to look them over I find foul brood in six out of eight stocks; in fact, only the swarms of this year are free from disease. I have never seen foul brood before, but have only been a bee-keeper three years, and have never examined any bees but my own, or had any advice on how to manage save what I got from the "Guide Book" and B.B.J. I now see from the "Guide Book" that it is too late to treat them by making artificial swarms. The food given was syrup in which salicyllic acid and borax were added. I noticed that the bees did not fly so freely as usual just after the honey harvest ended, but thought it was through bad weather; however, when a few fine days came there was a lot of fighting going on, so I closed the entrances and used carbolic acid to check it, and when I looked them over later on to see if they had enough stores for winter I find no brood but dead ropey stuff that will come out on the end of a match as described in "Guide Book." There is not much of it, some frames have none, others have a few cells, four or five have a larger number, and some perforated cappings. I have, no doubt, done a good deal myself towards spreading it through my apiary, for I gave the frames, after extracting, back to other stocks to refill after taking away. I may also say that a number of stocks died in this neighbourhood last spring through being robbed out and want of stores. I now believe foul brood was the cause, and I expect my own bees got it from the same source.

I did pretty well this year, considering the season. Of my six stocks in spring, three were late swarms, which I built up by giving frames of brood from the strong hives and continuous feeding till nearly the end of June. They gave me about 2 cwt. of surplus-honey and two swarms, which was an average of about 37 lb. per hive, and, as our honey-flow only lasted from two to three weeks, it was very satisfactory. This attack of foul brood, however, has cured me of the bee-fever, which I had before, and I see no good prospect in the future, for if I clear out all the hives and start afresh, the same thing will come again, unless all my bee-keeping neighbours will do the same—will follow up the same treatment in regard to curing as myself.—Iago, *Treharris, October* 17.

Reply.—It is, as you say, too late now to think of getting the bees off their present combs and establishing them in a clean hive. And it is no less certain that the chances are small of keeping healthy stocks of bees in proximity to a neighbour whose apiary is not only infected with foul brood, but where no steps are taken to check the disease. In the present instance, however, there has, no doubt, been some want of care on your part, because, in view of risk arising from the source of danger mentioned above, it should have been guarded against by more watchfulness by yourself. For the present we advise removal of all combs containing any cells of the "ropey stuff" mentioned, medication of all food given, and close examination of hatching brood in the early spring of 1903.

[2989] *Uniting Driven Lots of Bees.*—Will you kindly give me your opinion on the following matter? In September, a neighbouring bee-keeper found one of his stocks without brood or eggs, and as it also showed other signs in the same direction, he concluded it was queenless. He therefore, on October 3, got three lots of driven bees and united one of the lots with the stock referred to. Next morning, after waiting, a queen and a few dead bees were thrown out, but beyond this all went well then. He gave me the other two lots to unite with some driven bees I had that had been fed on syrup. We united them by throwing them out on top of the frames and driving them down with carbolic cloth. Next morning two pints of bees were on the ground, and another pint yesterday. Can you tell me the reason why in one case the uniting was all right and in the other a failure?—P. W., *Netteswell, Essex.*

Reply.—Without knowing what method of uniting was followed in the successful case, we cannot point out the exact reasons for the different result; but the failure was no doubt owing to your departing from orthodox and well-known methods of uniting, and adopting a plan of your own which, we think, is certainly original.

[2990.] *Wintering Bees.*—I should esteem it a great favour by having your opinion on the following:—I have ten hives of bees in my garden, and on one side of the garden facing south a long one-story building with shutters similar to those used at tanyards for drying skins, &c., I thought of removing the whole of my hives inside this building in a month or so for the winter months, facing the entrances of the hives to the shutters which open and close at will. As it will not be convenient to put them on the ground floor, I intend putting them on the first floor, which is about 7 ft. high, but would first like to have your opinion in the matter. If you advise this, when may I, with safety, remove them to the garden again in the spring? and would you advise me to open or close the shutters of the building or regulate according to the weather?—T. W., *Hollingsbourne, October* 20.

Reply.—The plan of setting the hives in a building for winter would not only involve a lot of trouble and some risk, but instead of doing good would probably lead to harm. Bees, if properly protected, winter best on their summer stands in this country.

Echoes from the Hives.

Llanvern, Croydon, October 17.—I read with interest the "Echoes" from the different parts of the country, and am glad to hear that some bee-keepers have not done so badly. With regard to myself, being somewhat near London, where we depend practically on the limes, the season has been very poor; in fact, I do not think the bees gathered anything at all from this source, seeing that what little honey I have obtained is of a darker colour. However, I have taken advantage of the slump to re-queen throughout, and now await 1903. If it is not troubling you too much, you might add a memorandum as to what the general colour of honey gathered from the limes should be. Is it the flower or the weather that governs this?—W. F. H.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

A "B.J." Reader (Flintshire).—*Discoloured Combs.*—The fact of brood-combs being somewhat discoloured is no detriment whatever to their usefulness. The comb sent contains no trace of brood at all, and only a little pollen in a few cells; not the slightest sign of disease.

J. M. Balmbra.—*Honey Exhibitions.*—We cannot "warn possible competitors" against making entries for a show unless you will furnish us with reliable documentary evidence of the shortcomings complained of. Why not write to the officials and send us on their reply? If this is done we might be quite willing to publish it.

W. C. W. (Sydenham).—*Faulty Sections.*—There is nothing wrong with the honey in section sent, though the flavour is a bit peculiar. Its colour is excellent, but the producer is a careless bee-keeper whose sections, to say the least, are not creditable to his method of producing section-honey for table use. The one sent is not well filled, while the wood is dirty and travel-stained and has the appearance of having been used last year. To be fit for market the wood of sections should be—so to speak—"clean as a new pin," and not soiled either with propolis or by unclean handling.

"Honey" (Bromley).—*Queenless Stocks in October.*—1. A stock of bees now "queenless and containing mostly drones" is not worth either time or trouble; to spend money in the purchase of a queen for it will be simply throwing cash away. 2. Neither ants nor earwigs are allowed to become residents in well-kept hives. It would be well for you to procure a "Guide Book" without which it is not much use attempting to make a success of bee-keeping.

Rev. V. S. (Blandford).—*Weight of Wax in Combs.*—We cannot lay down a rule giving even approximate weight of wax obtainable from combs removed from hives, which we have never seen. Probably the combs from two skeps—which only yielded 1½ lb. of wax—were very old, and consequently the gross weight would be largely made up of pollen and the cocoons left behind in the cells by scores of bees hatched therein. On the other hand, clean combs from surplus-chambers are almost all wax.

D. G. T. (Ilminster).—*Bee Training.*—It would serve no good purpose to print the rather silly nonsense in cutting you send. We have dealt with a somewhat similar cutting on page 409 of B J. for October 9.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

G. R. (Wimbledon).—*Black Combs.*—The colour and condition of comb sent arise simply from age. Such cells as it contains are useless to the bees either for breeding in or storage purposes. All such comb should be removed from hives and either melted down for wax or burnt. With regard to your sample, we should burn it, as the portion of wax it contains is not worth troubling over.

"P. Pool" (Mon.).—Comb contains foul brood of old standing.

*** *We are again compelled to hold over replies to a few queries—not urgent—together with some letters, till next week.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

CONVERSAZIONE.

(*Continued from page* 423.)

During an interval for light refreshments, when tea and coffee, &c., were served, Mr. Jesse Garratt called attention to the testimonial which had been prepared by a committee of members of the B.B.K.A. for presentation to Mr. John M. Hooker. The handsome illuminated address was on view mounted in a frame of dark walnut on the mantelpiece, and the text thereof set forth the valued services to the cause of bee-keeping which had been rendered by the recipient from the very foundation of the B.B.K.A.; indeed, Mr. Hooker's untiring efforts at a period when the Association was struggling in infancy largely contributed to its ultimate success. Mr. Garratt, in continuing his remarks, said that he felt sure Mr. Hooker would always be with the members in spirit, so absorbing was his interest in everything which concerned bee-keepers and their industry. The Committee who had been instrumental in organising the testimonial were anxious that this audience should see the address, which was about to be sent over to Mr. Hooker in the United States together with a moderately filled purse to enable him to make any purchase that he might choose for himself in recollection of his association with apiculture, and in memory of his bee-keeping friends in this country.

After tea the members reassembled in *conversazione*, while Lieut.-Colonel Walker was voted to the chair, and, on being given to understand that Mr. Tom Pogmore desired to exhibit a patent bee-catcher, called on that gentleman to show the appliance.

Mr. Tom Pogmore said that when swarms of bees settled in the hole of a wall or tree it was sometimes a troublesome and slow process to dislodge them, and he had therefore wished to show them a patent appliance by means of which this might easily be done. A funnel-shaped bee-escape was fitted over the entrance to the hole, which prevented egress except through the cone which tapered to a point outwards. When once outside, the bees could not find their way back again, but would enter the box fixed in a hanging position beside the hole and join the nucleus therein. A model illustrating the method of procedure was here exhibited. He (the speaker) stated that this plan had never been known to fail, and that a great number of stocks had been taken in Norfolk and Suffolk by this means. He admitted, however, the apparatus was only practical in midsummer, and that the brood hatching in the wall would be left untouched. When enough bees were collected, the box which served as a catcher might be left for two or three days, after which it could be removed as required.

Mr. Hill thought the idea a good one, but he was afraid that if bees were moved in the middle of summer they would go back to the old location.

Mr. Ackerman considered the plan, if practical and efficient, ingenious, for he had known cases where the roof of a house had to be almost stripped off to get rid of bees.

Mr. E. Walker pointed out that by the method in question he supposed the bees in the hole could be tapped every three weeks? Some discussion followed, in which varying opinions were expressed *pro* and *con.* regarding the invention, after which

Mr. Pogmore showed what he described as his new bee-feeder, which could also be used as a dummy-board, and which answered the purpose splendidly.

Mr. Weston examined the contrivance, which he said, to his mind, was simply an adaptation of the Simmins's dry-sugar feeder.

The Chairman expressed the obligations of the meeting to Mr. Pogmore for his ingenious inventions, and then mentioned that the first subject on their list for dealing with was "Bee-Smokers," and called upon

Mr. Reid, who related his experiments for the purpose of obtaining a better smoker fuel. At present the "Bingham" was, he supposed, the one in most general use, but its weak point was the frequent failure of the fuel to keep alight as long as required, which occasionally led to unfortunate results; and for a long time past he had been endeavouring to find a fuel that would continue to burn for an hour or two. Brown paper was very well when there was nothing better, but in its manufacture all brown paper had mineral matter added to colour it. The general tint of the fibre used for paper was light, and ochre was employed to darken it. This caused the substance to give off a dust in burning which had a tendency to get over the comb and into the honey. A perfect fuel should leave no ash at all. Ordinary cellulose yielded no ash that could affect the combs, and this substance made into cartridge form for insertion in the tube of the smoker gave precisely what was wanted. He exhibited several specimens he had made along with others illustrating the use of boiled straw-pulp, corrugated cardboard, leaves of the "Chapman honey plant," and other substances to use as smoker fuel. Peat finely pulverised, moistened, and mixed with a cement of flour paste to make the particles cohere, formed a good fuel. This latter should be moulded with a hole down the centre, through which the smoke would pass and the material burn regularly to the end. The production of a dense smoke was not necessary, but positively injurious. It was really the vapour of tarry substances which would invariably settle on the combs. He had often tasted these tarry matters from a smoker. He assured his hearers that bees

could be intimidated equally well with smoke that was almost invisible, and did not convey any disagreeable taste to the honey. Most inexperienced bee-keepers used a great deal too much smoke, and this for a time bewildered the bees, but after recovery, and not being gorged with honey, they were apt to seek for something to sting.

Mr. Jas. Lee said he had many years ago used peat-fuel, obtained from the peat bogs at Pirbright for smoking bees.

In reply to an interrogator who inquired whether it would be worth while to use a weak solution of saltpetre to facilitate the burning, Mr. Reid said that the nitrous fumes of saltpetre were not good for bees, but he thought the lower part of a cartridge might be touched by the solution with good effect.

Mr. Hill asked the cause of the black dripping substances, which was the chief obstacle against using brown paper in smokers?

Mr. Reid explained that brown paper took up 10 per cent. of moisture from the air, and in damp weather absorbed as much as 12 per cent. Smoker-cartridges should, therefore, be kept in a closed canister and as dry as possible.

The Chairman thanked Mr. Reid, who had been so prodigal in his experiments, which were always interesting and attractive, jocosely adding a hope that Mr. Reid would leave them a bit of *colour* in their smoke for the sake of the beginner, to whom a visible means of keeping the bees under was a source of great comfort in rather "trying" times.

Mr. Weston then desired to draw the attention of those who had been unable to visit the Dairy Show to the handsome "Coronation Challenge Cup" which, with great liberality, had been presented by the Baroness Burdett-Coutts. The trophy had this year been won by Mr. Seymour, of Henley-on-Thames, but the cup would have to be won three times by the same exhibitor before it could be permanently held, and would, therefore, form a suitable and worthy prize to be contended for at the shows of the British Bee-Keepers' Association. He congratulated Mr. Seymour upon his "win," and hoped that his example would be emulated next year, and thus be productive of the most strenuous competition.

The subject of "Brace-combs" was next in order, and might be well worthy of ventilation, and in opening the discussion thereon Mr. Weston detailed minutely the different conditions under which brace-combs were found in a hive. The present rage for cheapness accounted in great measure for the existence thereof. A cheap frame did not permit of an expensive top bar, and was the cause of the general ill-fitting and badly finished-off frames, all of which promoted the evil. Besides this, bee-keepers ought to study the exact distances required by the bees in their movements, or brace combs would result.

Mr. Reid said that the usual principle upon which the bees acted was to build brace combs over the spaces which they could very nearly, but not quite, reach.

In answer to an inquiry as to the best width of top bar to prevent brace combs—

Mr. Lee said he had tried this year in his apiary at Andover top bars $1\frac{1}{8}$ in. wide, and this prevented brace-combs. Indeed, he never found the face of the comb project out beyond the top bar. These latter were $\frac{7}{8}$ in. thick in the standard frame, but he thought a thicker bar would be better. In any case he certainly considered it desirable to reduce the width of the bottom bar, and bring it within $\frac{1}{2}$ in.

Mr. Weston spoke of Mr. Lee as an appliance maker who had now gone largely into the trade of honey producing, and had found out for himself the difficulties of his customers. He had realised the necessity of making a stronger top bar.

The Chairman suggested that the meeting ask Mr. Weston as Vice-Chairman of the B.B.K.A., to express to the Baroness Burdett-Coutts the grateful thanks of the B.B.K.A. for her handsome gift of a Coronation Challenge Cup, which proposal was assented to by acclamation.

Mr. Carr asked for the views of members regarding the peculiar effect of the use of the "fence" or slotted separators when working for section honey. He referred to sections staged at many shows, each of which had a disfiguring projection on the face of the comb opposite the slots in the separators used. He thought it was evident to any one that that was a great fault, and he hoped members who intended to exhibit next year would see that the opening was made smaller or done away with altogether. A number of the sections exhibited had ribs across the combs.

Mr. R. Brown said he had used slotted dividers, but with proper management never found any corrugations or marks on the face of sections, though he had seen them on the show-bench. The marks were probably caused by not pushing the sections up tightly. When using these slotted dividers he packed the sections up tightly with powerful springs. He used the no-bee-way sections. In order to clear the slotted separators from propolis after using, he had baked about 200 of them at one time in the kitchen oven, by which means all the wax and propolis ran off, and very little scraping was necessary.

Mr. Reid said the propolis would clean off well in a boiler of water with some soda.

Mr. Weston recommended the use of the solar-extractor for such purpose instead of the oven.

Mr. Reid's experience of metal dividers in section-racks inclined him against them, and he thought there was not the slightest doubt that many of the refusals of bees to start working in sections was attributable to the chilling effect of the cold metal.

Mr. Carr asked if any one present had tried

the American system of dispensing with quilts altogether, and adopting the flat-top hive-roof or cover with a bee-space between the top bars and the roof?

Mr. Weston said he had not tried this plan, but he thought it would be a great advantage if quilts could be done away with as they harboured moths and other insects. The bees endeavoured to propolise over every little aperture wherever air entered. They like ventilation at the bottom, but at the top they tried to stop up everything with propolis. A friend of his tried ordinary black roofing-felt, above the frame-tops in winter, but it had to be pulled forcibly off and destroyed when the bees began to work again in the spring. He did not believe it was necessary as a *sine qua non* to make the hives so warm at the top, and, moreover, did not think that so much heat was conserved, as many bee-keepers were inclined to maintain. It was quite a possibility that the crown-board might take the place of a number of quilts.

Mr. Reid corroborated Mr. Weston's views. The bees did not propolise celluloid, but only just touched it on the edge, and that substance made an excellent quilt. The bee-keeper could see what was going on underneath it without taking it off and letting in the cold. Unfortunately thick celluloid, which was usually supplied, buckled up, and consequently would not fit close. The best celluloid of all for use in the hive was a very thin sheet—that employed in the production of the cinematograph pictures. He would not have anything else. The bees ate less honey if kept warm at top. He did not use any winter passages at all.

Mr. Bevan was in favour of cow hair felt quilts, which refused to take up moisture, whilst flannel was an absorber.

The Chairman would be very sorry to do without winter passages. His bees were so provided by leaving on a super-clearer all through the winter.

Mr. Edgar Wilson, on behalf of Mr. Geary, then showed a glass observation hive, made for exhibition at the Crystal Palace, in which the combs were built on the glass; thus a bee-keeper could see from the back of the cells the eggs, the pollen, and the honey.

The Chairman doubted if a queen would deposit eggs on the surface of the glass; indeed, the conditions would be most unnatural, the exhibit, however, was no doubt interesting.

Mr. Hill did not believe the system could be of any practical use, as glass soon became cold, and the young grub would probably die.

Mr. Weston said, in his opinion the exhibit would evoke more general interest if the combs on glass could be shown in the summer time with brood in the cells seen in process of hatching.

Mr. Wilson then produced an apparatus invented by Mr. Geary for the purpose of ensuring the fertilisation of queens by selected drones, and said that the inventor was present and would, if allowed, be pleased to explain its use. Mr. Geary then came forward and began by saying he very much doubted whether the fertilisation of queen bees ever took place in the air or on the wing as was generally supposed; he then produced an apparatus, and said by his plan and the use of the appliance shown a queen could be held in a flying position and the process of mating facilitated by the bee-keeper himself handling the drone. The advantage thereof was that a cross or a pure breed of bees could be produced as the bee-keeper desired; but he (the speaker) must admit that he could only claim 5 per cent. of successes.

Mr. Hill wished to know how Mr. Geary could prove that the queen had been mated on the particular occasion when assisted by the bee-keeper and controlled in the apparatus? To which Mr. Geary replied, that the experiment would only be attempted when the queen was secured as she passed out of the hive on her mating trip. On being asked if he had himself got queens mated on the plan described, Mr. Geary replied in the affirmative, but said he could only get five queens mated out of a hundred experimented with.

After a few further practical questions by those present, which created some laughter, the Chairman said the contrivance was ingenious, but he thought it would require a great deal of demonstration before its practical usefulness could be admitted. He could not himself see how queens were to be secured and handled as stated. However, on behalf of those present he thanked Mr. Geary for showing them his invention.

Mr. Weston showed samples of honey from the famed Mounts Hymettus (Athens) and Grindelwald (Switzerland), which were passed round and generally tasted.

Mr. Weston then said the meeting was aware that the Royal Agricultural Society had held its last itinerant show, and would probably be established in future on the north-west frontier of London, which would render it far more accessible to the majority of the population than when held at Carlisle, or at Maidstone and other distant parts of the provinces. The substitution of a fixed abode would no doubt, therefore, be a permanent benefit to all. It occurred to him that this change would bring in its turn some other developments for the bee industry. Firstly, it would probably enable the B.B.K.A. to erect a permanent staging, upon which honey could be better shown than had hitherto been done in the temporary tent or shed put up for the exhibition of it. This would enable them to remodel their schedule, and change the system of prize-giving, as far as such alteration was deemed desirable. In that respect he might suggest that instead of giving a prize for a collection of appliances, would it not be an advantage to give a special prize for a

particular appliance, so that the thoughts and energies of inventors might be concentrated on one special point, and therefore be more likely to yield success, than in traversing the old field of appliance invention. He might also say that some assistance would be required if apiculture was to secure a permanent location at the show. The Royal Agricultural Society could not do everything, and he hoped that between this and the next R.A. exhibition it would be possible to establish a fund to promote the undertaking, and find out the best means of carrying it out.

Mr. Carr said he hoped no effort would be made to do away with the class for "collections of appliances" in order to substitute one for a single or particular kind of appliance. The collections class was good for illustrating everything that was best in modern bee-keeping, and helped very largely to make up the attractions of the show as a whole.

Mr. H. Jonas thought the most important point the Committee would have to consider was the building that would have to be put up, and whether the Royal Agricultural Society would erect the premises required; therefore, some effort should be made to ascertain what the arrangements were to be as early as possible. He believed that if bee-keepers desired a special building they would have to contribute towards its cost. The Society had secured 200 acres of land at Twyford Abbey, near to which the chief railway companies had running powers.

Mr. Carr thought it would be worth while for all bee-keepers to unite in helping to build a place specially adapted for their purpose, because if the Royal Agricultural Society allowed this, a permanent home would be assured to the bee-keeping industry.

The Chairman endorsed this, and said that it was of more importance at present to subscribe to this object than to a fund for giving additional prizes.

The Secretary believed that if the B.B.K.A. were well supported by all the county associations there would be a good chance of obtaining a desirable site.

Messrs. Pugh, Hill, the Secretary, and others discussed the system at present in vogue of awarding prizes, the general opinion being that funds should be raised for the purpose of providing separate prizes for the products of each county, the competition being confined within each county respectively.

Mr. Willard said similar troubles arose in connection with the fruit show at the Royal Horticultural Society. Of course, Kent could produce better fruit than other counties, consequently there was a reluctance to compete. Now, however, an arrangement had been made to group three adjacent counties together, and award separate prizes for each separate group. This was much fairer than the previous plan of offering prizes for the whole of England, because the south, with its climatic advantages, could obviously do better than the north. He thought the bee-keeping schedule of prizes should be worked out on somewhat of the same lines.

Mr. Sharp pointed out that the principle might be capable of evasion, where a man resided in one county and perhaps kept bees in two or three others.

Mr. Brown lived in Hunts, but within fifty yards of the Cambs. border, and he approved of the Royal Horticultural Society's plan of grouping counties.

Mr. Hill said that in Derbyshire he could not produce any honey, except a little from hawthorn, before the third week in June.

The Chairman said that must be borne in mind in framing the schedule. He agreed with the grouping plan.

A vote of thanks to the Chairman (who, in acknowledgment, said the meeting had been a most successful and instructive one) brought the proceedings to a close.

(Owing to pressure on our space, Report of the Monthly Meeting of the B.B.K.A. Council, which took place on the 23rd inst., is unavoidably held over till next week.)

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

COMMENTS ON CURRENT TOPICS.

CAN A "BOGIE" MAN WORK A MIRACLE?

[4925] Under the heading of "Curing Vicious Bees" on page 333, this query is answered in the affirmative, for there we read the following: "I advised that a bogie man or scarecrow should be set up near the hive, and the cure worked wonderfully, for I was informed 'All the bad bees evidently stung the hat, which was covered with stings, and we have had no stings since.'" This, if true, is a miracle cure of the simplest kind, whereby any one can get rid of vicious bees with the greatest ease. I am very much astonished that no one has taken notice of it hitherto, but the whole affair is so astounding that I cannot let it pass without commenting on it and expressing a doubt as to the genuineness or thoroughness of the cure that is said to have been wrought.

A bee, even in a passion, does not evince a blind fury in its action or conduct, but rather shows a method in its madness which enables it to reserve the final thrust for the most vulnerable point of its adversary. It never circles round a tree, plant, or shrub, looking for a weak point, as only animated nature has anything more than a passing attraction for it. So I cannot agree to the plea put forward in [4867] that if a "bogie" man were set up he

would receive the stings of all the irate bees of a vicious colony until only the good-tempered ones are left, and, hey presto! a cure of viciousness takes place, and the stock becomes gentle and tractable. Come, and let us reason it out together, my bee-friends, and discover if the argument holds water? I trow not. A bee is, I fondly believe, a creature of sense and discretion, and (call it instinct, if you like) it can reason out a point admirably. It very rarely stings any other than a vulnerable part of either man or animal. It darts furiously at several points, and strikes hard, but not home, for it is discriminating, and knows when the act would be a case of love's labour lost. This is not a result of mere blind chance or instinct alone, for the creature is admirably provided with organs, serving the special function of guides, to direct it where it can make an impression. The forward part of the sting is furnished with palpi, or feelers, with which it tests the nature of the substance or material into which it is about to thrust its lancets to prepare a way for the injection of the formic acid from the poison sac. Now these palpi, on perceiving that the substance has no feeling, or is impervious, telegraphs this fact to the brain of the bee, and an instantaneous message is returned instructing the sting to desist. Note this procedure on some fine day in summer, when your head, masked in a panoply of mail in the shape of a net veil, enables you to pluck up sufficient nerve to stand stock still with a few passionate bees buzzing all around. Observe how they strike fierce and fast at your trousers or sleeves when you move a limb. Did you ever find that they, other than accidentally, left a sting behind? I never did, and I am almost prepared to make the positive statement that a bee never stings such an object voluntarily. The feelers show it the futility of such a procedure, and, wise creature, it retains its sting for some future occasion, when it can strike home. But I have a second objection to the sanctioning of such a "cure" for viciousness. The bee cannot do what is claimed for the "bogie" man's hat. When it inserts its sting beneath our cuticle the barbs keep their hold, and the consequence follows that the bee is unable to extricate the weapon. It circles on it as on a pivot in the vain endeavour, till, acting on a law of nature, the weakest point gives way, and the bee is left stingless. The same law allows it to thrust the sting into such an object as a felt hat with perfect impunity, and the bee departs with its sting. The hat is not a "medium" for extracting stings. Holding the opinion, therefore, that a bee can not and will not sting such an object, I vote the cure an impossibility. I have no desire to question the bona-fides of Mr. Sole's statement. Indeed, he founds the whole argument of the wonderful cure, not on his own authority, but simply records hearsay evidence, which does not pass muster in a court of law. I fear, therefore, "some one has blundered"; and I, for one, will remain a "doubting Thomas" until some positive proof is produced showing that bees can be cured of viciousness in this novel way. For the statement really means that they work out their own salvation by voluntarily offering up the lives of all the wicked brethren—or rather sisterhood—in one wild orgie of savage and reckless self-slaughter, all sacrificing their lives, not in defence of home and friends, or for the good or well-being of the community, but from an insane and insensate desire to strike at any object bearing the most remote resemblance to the genus homo. Apart, however, from this one point of indiscriminate suicidal mania I am ready to admit that the idea of a bogie man set up in close proximity to a hive of vicious bees may do some good in curing them by familiarising them with the object. Familiarity may breed contempt, as it does in the case of the crows, or it may simply serve to convince them that the figure is no enemy, and that it is not there with any overt intent of attacking their dear homeland. From this standpoint, I am prepared to accept the "man," and deem the matter one worthy of at least trial and experiment.—D. M. M., *Banff.*

NORTH YORKSHIRE NOTES.

[4926.] The reading of bad reports I presume will now be getting monotonous, but as our bad seasons should be chronicled as well as the good ones, I venture to give an outline of the way bee-keeping has fared in this part of the country. Without doubt, the year 1902 has been one of the worst in this district for many years. From the early spring to May 20 the weather was more like winter than early summer as may be than the opening days of spring. Judged by my "Notes," which read thus: "May 6, cold and stormy; ground covered with snow." "May 23, the first bee-day of the season." Then by the end of the month the weather changed to wintry cold again, and so it remained until June 22, when the bees commenced working on the May-bloom, then followed the various later flowers. But besides being a very poor season, it has been a very peculiar one with me. For the past seven years I have invariably had a large amount of honey in July varying in colour from very dark to absolutely black, and in quality practically unsaleable; this year, on the contrary, there has not been a trace of dark honey gathered. Such surplus as my own bees gathered in July last has all been good saleable stuff, not only so, but in that month my bees had the best honey-gathering time for July that I have experienced for the past seven years. In plain words, the bees cleared off all expenses for the current year, and left me a little to the good besides. I am sorry to say, however, many hereabouts were less fortunate than myself,

for a good few stocks had already succumbed before the favourable weather set in, and in others the bees were so reduced in numbers that they were never able to pull themselves into form.

The heather (the sole hope of our harvest) was fully three weeks late. I first noticed bees going to the heather on August 26, and then all seemed to go on well until September 1; but on the 2nd of that month a change for the worse in the weather took place. Honey almost ceased to come in, and by September 13 all was over! Our hopes had all vanished in mid-air! My own surplus was forty finished sections and about 2 cwt. of extracted honey. Not one quarter of my usual crop. Here let me say that my "Wells" hives on the "W. B. C." principle have again shown their superiority in a bad season. Taking the heather harvest—which is acknowledged to be one of the worst ever known—my twenty single hives gave me forty sections among them — an average of two each; while nine "Wells" gave 224 lb. of extracted honey, an average of nearly 25 lb. each. Certainly a poor thing in either case.

With my remaining "Wells" hive—I have ten in all—I did a little experimenting. Seeing so many discouraging accounts in the B.B.J., I resolved to try one "Wells" for section-work with one queen only. I did this in order to see if those hives could not be utilised for this purpose; and I now give my experience in order that if BEE JOURNAL readers found difficulty in working these hives with two queens, they could adopt the single-queen plan and devote them to working for section-honey. My plan was this: I made one "Wells" up with one queen in her first year, put in two box or hollow dummies to take the place of four frames, then extended the brood-nest up to sixteen frames. This done, I added a section-rack. The result was my securing fifteen sections before the heather season and eight from the heather—twenty-three in all, besides 7½ lb. in unfinished sections. I also took six brood-frames, which yielded other 15 lb. of extracted honey—a total of 45½ lb. for the season. It must be understood, however, that one season's trial does not prove this plan to be good or bad. I simply give results of the first trial, and any one that finds a difficulty in working double-queened hives might try it and give us their opinion on the matter.

In conclusion, let me say, although the season has been very poor, it has taught me a lesson or two I shall not readily forget.—J. RYMER, *Levisham, Yorks, October 23.*

THE SEASON IN ROSS-SHIRE.

[4927.] The season here has been the worst I have known since I started bee-keeping. The weather was made up of "samples," mostly bad ones. Winter was fairly well represented. In several cases the bees did not even enter the supers at all. Strangely enough, the season of 1892 seems to have been in the north very similar to the one just past, being "cold, stormy, and also honeyless." As good and bad seasons seem to come time about, surely we may look forward in the coming year to a season as good as that of 1893. The few saleable sections I got fetched a good price, but even although, the value of the crop is only a quarter of that of last year's.

Heather sections are very scarce. Stocks were prepared as usual by the beginning of August, but the heather was not, and as there was very little honey in the frames, the queens were not encouraged to keep on laying. By the end of the month frames were crowded with bees, but almost empty of brood, so that when a few good days came during the first week of September, the bees, having plenty room below, declined to store any honey in the sections. Stocks have, therefore, gone into winter quarters with plenty of natural stores, and vacant cells below same well filled with brood.

One stock is exceptionally strong; they are a special strain from a well-known breeder, and were transferred from a skep on to nine frames (not standards), when, in the third week of September, they were closed down for winter. They had a large quantity of honey in frames, with brood in all stages, were covering all the nine frames and clustered below them and on outside of dummy board. While the drones were cast out of all my other hives a month ago, these particular drones are still on the wing—in this case a sign of prosperity. The stock is so wealthy that it can afford to tolerate the useless drones.

I see that your correspondent, "D. M. M., Banff," has fared no better than others this season. His system of tiering four or five racks of sections high, though excellent in a good season, and in districts where heather comes in as the main crop, would have been very much at a discount during the past sunless summer. I had one stock on fifteen frames, with four racks of sections on top, and two below as a nadir; they had plenty of ventilation, and yet the bees swarmed; the queen's wing had been "clipped," and she fell on the ground in front of the alighting-board. The swarm did not form a cluster, but lay on a bed of lettuces in front of the hive. By the time I had the queen and a handful of her subjects in the hiving skep, the swarm had missed her and the bees were fast going back to the hive.

I laid the skep on its side among them and threw in a few of the clustering bees; these started "calling," and the rest soon found their way in. This swarm weighed 8½ lb. net. Of the four section-racks, the three lower ones were well filled with comb and honey, but the queen had used several of them for breeding, and so spoiled them. In the fourth the foundation had not been worked out.

The fifteen frames were all crammed with brood, and there were over a dozen queen-cells, several already hatched out. I made up some nuclei with these queens and a few frames of brood, cut out all the cells, and then returned the swarm in the evening.

When the young queens started laying, the old queen was removed and the stock divided in two, on the "Wells" principle, with a young queen and eight frames of bees on each side of the perforated dummy. They worked well, and gave a fairly good surplus of heather honey.

There can be no doubt that this nuisance of "undesirable swarming" is owing to prolific queens not getting enough breeding room. If we are to keep to the "Standard" frame, I think we must use at least twenty frames; get these filled with brood, and contract to the usual ten frames when the honey flow comes on. Mr. Rymer's method is a step in the right direction, but it is only suitable for districts like his own; in this part of Scotland it would result in a poor crop of clover honey, owing to the production of an excess of brood during the height of the season, and if we were to take off sections for three weeks while waiting for brood to hatch out of the upper story, what would become of the heather crop, coming, as it generally does, immediately after that from white clover?

What is wanted is a method of working our stocks to take full advantage of the prolificness of our queens, and at the same time to guard against over production of brood once the honey flow has commenced. I think we should make an effort to solve this problem, and those interested in its solution should experiment during the coming season, and report results in our JOURNAL.

There are some bee-men here who prefer old queens, as they think a queen in her first season is too prolific. Mr. Simmins says, "A queen cannot be too prolific, *but* our management must ensure that she does her utmost before the honey flow begins." When we realise the truth of these words, and work our stocks on a system that will enable us to make the most of the laying powers of our queens, our bees will always be in good condition, the "wintering" problem and "spring dwindling" will cease to trouble us, our colonies will build up in spring without any nursing, and will be ready for the honey flow at whatever time it comes.—J. M. E., *Ussie Valley, October* 22.

A SWARM IN SEPTEMBER.

[4928.] The following swarming incident might possess interest for some of your readers: "As I sat at dinner on September 9 last, a swarm of bees made their appearance in my front garden, and, after flying about for a short time they went over the house and settled in my back garden. Close by was a small apple-tree which at the time was a mass of bloom. I got the swarm into a hiving skep, and later in the day hived the bees in a bar-frame hive, giving them some few frames of honey I had by me. I also added some frames of foundation and started slow feeding. All has since gone on well, and on looking into the hive on the 11th inst. I found the frames of foundation fully drawn out and quite a lot of brood in them. The old axiom says: "A swarm in July is not worth a fly." I am going to see what a September swarm is worth, when dealt with on modern methods? I think it must have been a "hunger swarm," but should like to hear your opinion?—H. MAY, *Kingston, Wallingford.*

[We quite agree with your view.—EDS.]

WEIGHING HIVES.

DAILY GAINS AND LOSSES IN WEIGHT.

[4929.] I notice your correspondent, "G. D., Harrogate" (4908, page 404), gives an interesting report of daily gains and losses on a tested hive, and on my own behalf I beg to thank him. I note his remark in postscript that limes flowered well. If he ever visited the Valley Gardens when the limes there were in flower, there was one (there are only four trees that flower out of a total of twenty or thirty trees), only a small lime as limes go, but it was one mass of bloom this year; yet I never saw a single bee on it during the whole time it was in bloom, possibly the weather was too cold. But the point is, why should only four trees flower out of the lot? I have each season inquired of the gardeners working there, who have known the trees since planting, and they cannot give any reason for them not flowering.—W. G., *Rastrick.*

THE "EDWARDS" SWARM-CATCHER.

[4930.] Noticing the request, on page 410, of "Out-Apiarist" for the experiences of those who have tested the appliance which forms the caption hereof, I beg to second that request, and would *personally* feel much obliged if every bee-keeper who has used it would report.

Though I did not intend, until the appliance had had some disinterested trial, that any great quantity should be placed upon the market, I must confess that I am somewhat surprised and disappointed at the very small number requisitioned. The action of the appliance makers in whose hands I placed it of adding 2s. to the price may have had some deterrent effect on sales, but I expect the main reason may be found in the fact that former "catchers" put on the market have not fulfilled their destiny, and the price paid for them has been just so much money thrown away. "Once bitten, twice shy;" and bee-keepers can scarce be blamed if they are slow in taking up with something which, for all

they know, may prove merely another *ignis fatuus*.

As a commencement, just to start the ball rolling, I will relate my experiences with the "catcher" for 1902, but before I do so I will go back to the previous year, for "thereby hangs a tale" or a "caution." One of my hives, experimentally fitted in 1901, cast a swarm in my absence; the swarm clustered and eventually returned, leaving the "hiver" box untenanted. On my return I examined the appliance, and found the point of the cone blocked by the body of a burly drone, who, having got his "head and shoulders" through, found himself in such tight quarters that he could neither go forward nor backward. The "cone" in question was one of those little stamped brass affairs put out some few years ago by Abbott Bros., and though its nose had been filed away to enlarge the opening, the filing had evidently not been sufficiently thorough. This defect having been remedied, the swarm was, when it came off again the following day, duly hived, precisely "to order." "All's well that ends well," but by careful watching I found that drones had some difficulty in climbing up owing to the smoothness of the surface of the cones and to the infrequency of the perforations therein, and though it involved a little more trouble to makes cones of finely-perforated zinc, I found the substitution of the latter for those of brass to be a decided improvement. I am led to dwell somewhat upon this point because it has come to my knowledge that at least one of the dealers who has been handling my "catcher" has departed from the pattern of the one sent him to the extent of fitting the brass cone, the opening at whose point is not sufficiently large to allow the passage of the queen. All "catchers" then sent out by this firm have been rendered useless for the purpose intended by the trivial, yet serious, overlooking of a simple detail.

Now for 1902. Though nearly all my hives were fitted with "catchers," I only had two swarms; one duly hived itself in regulation manner on June 22, but the other, which came off on the same day, returned to the hive, leaving nothing in the "hiver" but a large force of drones. On the following day the colony swarmed again, but though the queen was trapped in the "hiver," the bees neglected her and went back into the hive. I withdrew the front slide to release the queen, but apparently she failed to get back into the hive, no further swarming taking place until July 5, when, during my absence, a swarm came off and returned, leaving no queen upstairs (I might here say that I had previously altered the "catcher" by substituting for the zinc cone a different kind of "trap" (?), which allowed queen and drones to go back to the hive). On the following day further swarming occurred, and though the queen was seen in the "hiver" box and the bees commenced to cluster there, the swarm eventually withdrew into the hive proper; the new "trap" was now removed and the cone replaced. Being away from home all the following week I am unable to say what took place, but on the following Sunday, July 13, I found on reaching home that the "hiver" was tenanted by a swarm. This was towards evening shaken out in front of the hive, and next morning a dead queen, considerably mauled, was found on the alighting board.

I was considerably puzz'ed to account for the vagaries of this colony, and was at first inclined to blame the "catcher," which was a slight variation from my standard pattern; but on consideration, and in view of the subsequent success of the appliance when the drones had been thinned in numbers, I feel that I may with reasonableness put the blame upon the large number of drones contained in the hive. The combs in this particular hive (which came into my possession in a roundabout way), owing to economy (?) in the use of foundation had a large number of drone cells, and an abnormally large number of drones were raised, in so much so that when the earlier swarmings took place the inside of the "catcher" and the front of the "hiver" box seemed to be a solid mass of struggling drones trying frantically to secure a passage through the slight avenues of escape offered.

It has been suggested to me in several quarters that the communication between "catcher" and "hiver" box—a single cone, allowing but one bee at a time to pass the turnstile—is too slight; that more cones would be an improvement. In reply, I must say that the construction of the appliance necessitates the communication between the two chambers being immediately above the point of the angular front; hence a duplication of cones is inadvisable. But in view of the circumstance just related, I am of opinion that the communication might be extended with advantage, to which end I propose to use a cone with an oval nose, allowing, say, the passage of three drones at a time. I also intend next season to try the effect of using a plain cylinder of perforated zinc about 2 in. high.

In conclusion, I would say that for the future the "catcher" (the lower portion) will be made to one standard pattern and size—the same as those sent out the past season—leaving the adaptation to individual hives of varying sizes to be made by means of wider (or narrower) fillets, upon which, in any case, the hive body has to be mounted, in order to accommodate the appliance. In the matter of the "hiver" box—the upper portion—I shall arrange, in consequence of repeated request, for the purchaser to have the option of a simple box in one piece, or, *especially for out apiaries*, a box as at present, but arranged to take standard frames. — H. EDWARDS, *Shrubs Hill Cottage, Sunningdale, October* 14.

P.S.—Will Mr. Herrod please report as to the "catcher" sent to Swanley for trial at the B.B.K.A. apiary?

MARKETING HONEY.

[4931.] A great deal has been said during the year now drawing to a close on the subject of marketing honey and prices wholesale and retail, and, after reading the various remarks of correspondents who express their views in our B.B.J. upon the matter, the conclusion I have arrived at is that the method adopted by A. H. Homersham, whose letter appears on October 16 (4917, page 418), is as sensible and practical as anyone need to adopt. It naturally follows that if I have the best honey in the country for sale, and would-be buyers do not know it, they are not likely to come to me uninvited. My remedy, therefore, lies in letting them know where my honey is to be had, and to my mind nothing seems more direct than the sight of samples, coupled with the transparent window-bill announcing the fact that *Honey from our own bees* can be bought here. Now if we consider the question as practical men; bearing in mind that in a short time (say, a month) 70 lb. of honey was disposed of at 10d. per lb., how much would be sold in twelve months at 1s. per lb.? I venture to put the quantity at 700 lb., with an increase of sales annually. Most bee-keepers are in too big a hurry to sell out. If better prices are to ever be obtained, the middleman must be dispensed with, and, if necessary, the consumer waited upon; at least, that is my opinion. I sell only to the consumer direct at 1s., although I have been repeatedly asked by the tradesman who offers 9d. if I had any honey for sale? I prefer to wait, and find it pays me better to do so. Hoping for a better season next year, and looking forward to other opinions and better methods of selling honey.—W. W. K., *St. Brelades, Jersey, October* 21.

Queries and Replies.

[2991.] *Removing Bees from House Roofs.—A Promising Start in Bee-keeping.*—Being in the building line I had occasion the other day, in the course of business, to remove a swarm of bees from under the slates of a house roof. In doing this job I killed as few bees as possible, cutting out the combs—which were evidently old, but nearly full of honey—one by one with the bees on them, and putting all into a box, thinking I might make use of them; and, although not a bee-keeper, and knowing nothing about bees, I was very unwilling to destroy them. I now write to ask:—Can I keep the bees alive shut up in the box all through the coming winter? I have made a hole in the box, and the bees keep going in and out every fine day, but all seem to come back before night. I have become so much interested in my capture that I would like to start bee-keeping as soon as I can, and if you will recommend me a good book on the subject your help through the BEE JOURNAL will be much appreciated. —F. L., *Walton-on-Thames.*

REPLY.—Replying to your question, the bees must on no account be kept "*shut up*" in the box all through the winter, but should be allowed free to come and go as they are allowed to do now. Beyond seeing that they are well protected from "wind and weather" and kept reasonably warm, all will, we hope, go on well, if food is as plentiful in the combs as stated. With regard to starting bee-keeping, you have made a very promising beginning, and with the help of a reliable "Guide Book," which may be had post free for 1s. 8d., we have no doubt of your success.

[2992.] *Help for Beginners in Bee-keeping.*—Kindly give me some information on the following points: About the middle of June last I received the first stock of bees I ever possessed. Whether they were a young swarm or a stock that had swarmed I do not know. The bees were on eight frames of old comb with practically no store of food, and so the weather being cold and wet I had to feed them for a while. I afterwards put in three more frames fitted with full sheets of foundation. Then about the middle of July I gave them a super of twenty-one sections, on which they soon began to work hard whenever the weather was favourable. By the middle of September they had filled four of these sections, and some five more nearly so, but uncapped, and the other dozen contained more or less honey. They had, however, but little stores in the brood-nest, so I fed them up well with syrup, using 21 lb. of lump sugar, besides giving them some of the unfinished sections to clear out. 1. Will this be enough for their winter store? I think the bees are very strong in numbers and there are still a good few drones left, but most of the latter have been killed off. I also see the bees entering the hive with pollen on their legs and some carry in a white-looking material. 2. Is this latter used for capping the combs or is it food for young bees? 3. How many swarms may I reasonably expect from the hive next year if it is a favourable season? I am anxious to have a pretty good idea of that so that I may know how many hives to provide during the winter. If you will kindly help me I shall be obliged.—J. SENOGLES, *Douglas, Isle of Man.*

REPLY.—1. If the weight of food stated was given late in September, it will be ample for wintering on. 2. The "white-looking material" would, no doubt, be pollen, like the rest. 3. Two new hives will meet all your requirements, unless your intention is to go in for increase in preference to securing some surplus-honey. You cannot have both.

[2993.] *Queens Passing Through Excluder Zinc.*—I am writing to ask if you advise the use of drone-cell foundation for shallow-frames? I had three hives this summer in which drone-base foundation was used in the

shallow-frames intended for extracting, but the queen must have gone up through the excluder-zinc placed above the brood-chambers, as the bees built queen-cells in them, and hundreds of drones were hatched out in the super. I have kept bees since 1895, and never had this happen before. Of course, I got no honey from these hives till the excluder was removed and the drones smoked down. Can I do anything to prevent a recurrence of this mischief? The B.B.J. and *Bee-keepers' Record* are my best bee-friends, and, along with your excellent "Guide Book," have taught me all I know about bees, but I have still much to learn.—DRONE BEE, *Wymondham, Norfolk, October* 22.

REPLY.—Our preference is for the ordinary worker-cell foundation in surplus-chambers, because, although it may be advantageous to have honey for extracting stored in drone-comb, there is just the "set-off" against this which caused your own trouble, *i.e.*, the curious fact that queens make desperate efforts to pass through excluder when drone-comb is being built, in order to deposit eggs therein. The only prevention is to be sure that the excluder zinc is correctly made and properly fitted. We say this because it often happens that it is the bee-keepers own fault when queens pass into surplus-chambers through lack of care in fixing.

[2994.] *Bees Destroyed by Rats.*—I have been a bee-keeper for many years, as was also my father before me, but we have never before experienced anything similar to what happened last winter in my small apiary. We had six stocks of bees to commence winter with, but when spring came there were only two left alive, the other four having been killed by rats. I keep my bees in straw skeps, and the rats had eaten large holes through the skep sides and thus got at the honey, all of which they consumed. It is perfectly certain that it was rats that did it, because I caught one in the act. There is a small brook close by and rats are rather numerous about the spot. 1. I will be much obliged if you can tell me how to protect my bees, which are still in straw skeps, from the rats in the coming winter? 2. You might also kindly advise me where to procure the best wooden, or bar-frame hives for use next summer? I have taken your useful paper, the BRITISH BEE JOURNAL, every week since I saw the first copy some time ago.—P. S., *Stockbridge.*

REPLY.—1. A rough box-cover is the only thing we can suggest for keeping off rats. 2. Please refer to our advertising columns for the addresses of appliance dealers. We cannot in fairness recommend special firms, and good hives are procurable from any of our leading advertisers.

*** *The Report of the Glamorgan B.K.A. Conversazione and Mr. A. Sharp's Paper on "The Hunts B.K.A. and its Work" are unavoidably held over till next week.*

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

H. S. (Birmingham).—*Lantern Slides for Lecturing Purposes.*—These can be hired from the B.B.K.A. on application to the Secretary, Mr. Edwin H. Young, 12, Hanover-square, London.

J. F. (Doncaster).—*Bee Nomenclature.*—Bees sent are the ordinary brown variety common in this country.

D. W. INGHAM (Ripon).—*Insuring Hives.*—The Secretary of the B.B.K.A., Mr. E. H. Young, 12, Hanover-square, London, will supply information regarding the insurance of bees.

E. LUCAS (co. Down).—*Buying Queens from Foreigners.*—It is a pity you went so far back in our advertising pages as May, 1901, when ordering queens, as it is, of course, possible that the advertiser in question may be dead or out of the business, as he does not advertise with us this year. We know of no other reason why your letters should not be answered.

T. WILCOX (Talywain).—*Abortive Queen-cells.*—There are no reliable means of judging whether or not queen-cells are likely to be abortive until the hatching-out time approaches, when a "ripe cell" is easily distinguishable by the "thinned down" and "mealy-looking," so to speak, appearance of the capping at point of the cell. A practical eye readily picks out fully rope-cells, though some abortive ones are apt to deceive beginners.

T. LLOYD (Pembroke Dock).—*Wax Scale.*—The curious "white particles" you refer to are simply the wax-scales extruded between the segments of the abdomen when the insect is preparing for comb-building.

F. J. (Mountmellick).—*Winter Coverings for Frame-tops; Painting Hives Different Colours.* — 1. American cloth used as stated, "glazed side down," and thick grey under-felt as sample, make as good quilting for winter as we know of. 2. The advantage in painting hive entrances of different colours is to assist young queens in locating their own homes on returning from their mating flight. 3. *Uniting Bees.*—If your plan of uniting bees succeeded, it need not be departed from, but we prefer flour to thin syrup for the purpose, because of its not tending to start "robbing," as syrup not seldom does

Suspected Combs.

R. L. (Essex).—The piece of comb sent was absolutely reeking with foul brood, nearly every cell being full of the brown sticky matter characteristic of the disease in virulent form. You should see that the contents of your neighbour's hive, and the handful of bees it contains, are promptly burnt, for the sake of your own and other healthy stocks.

Editorial, Notices, &c.

BRITISH BEEKEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Thursday, October 23, Mr. T. I. Weston occupying the chair. There were also present Colonel Walker, Messrs. R. T. Andrews, W. Broughton Carr, H. G. Morris, E. Walker, and the Secretary. Letters regretting enforced absence were read from Miss Gayton, Rev. W. E. Burkitt, Mr. H. Jonas, Mr. W. F. Reid, and Mr. F. B. White.

The minutes of the previous meeting were read and confirmed. Three new members were elected as under:—Mr. F. J. Bernau, Norfolk Lodge, Redhill; Mr. L. Bigg-Wither, Dilwyn, R.S.O., Herefordshire; Mr. G. A. Shaw, Springfield, Feltham.

Mr. Weston presented the Finance Committee's report, which was duly approved.

In accordance with the reports of examiners it was resolved to award third-class expert certificates to Messrs. J. Fancourt, G. H. Garner, and Allen Sharp.

The Secretary stated that about eight or nine candidates had intimated their intention of presenting themselves for examination for the second-class diplomas on November 14 and 15, and arrangements were made for the nomination and appointment of "Supervisors."

Referring to insurance for bee-keepers, a statement was laid upon the table showing that the number of stocks of bees insured to date was 6,251.

Letters from the Secretaries of the Leicestershire and Northumberland Associations were read to, and dealt with, by the Council.

Proposals made at the recent conference of representatives of County Associations were considered, and, after some deliberation, adjourned for further discussion at future meetings.

The Chairman reported that, in accordance with a request of the Council at the last meeting, he had interviews with Mr. Compton-Bracebridge, of the Royal Agricultural Society, in regard to the proposed new classification for honey at the 1903 Show. It was thought the suggested changes were likely to meet with approval of the Society, and it was requested that the proposed alterations should be embodied in a letter to be put before the Stock Prizes Committee on November 3. The Council have therefore grouped the counties as enumerated below subject, of course, to such minor alterations as may be considered necessary or desirable:—

1. Cornwall, Devon, Dorset, Somerset, Wilts.
2. Berks, Hants, Isle of Wight, Surrey, Sussex, Kent.
3. Suffolk, Essex, Bucks, Middlesex, Herts, Oxon.
4. Norfolk, Cambs, Hunts, Rutland, Beds, Leicester, Northampton.
5. Gloucestor, Monmouth, Worcester, Hereford, Warwick, Shropshire.
6. Notts, Lincoln, Cheshire, Derby, Stafford.
7. Yorks, Lancaster, Northumberland, Durham, Cumberland, Westmoreland, Isle of Man.
8. Welsh Counties.
9. Scotland.
10. Ireland.

It is also proposed to allocate four classes for honey to each division or group, viz.:—(*a*) Light honey. (*b*) Medium or dark-coloured honey. (*c*) Granulated honey; and (*d*) Comb honey.

These radical changes are brought forward with the object of engendering a greater interest in the "Royal" Show as a national exhibition, and making the bee and honey department thereof more truly representative of the industry. It is hoped that bee-keepers in the various districts will help to this end.

The Council, being anxious to draft a uniform set of "Instructions to Experts" for use throughout the country, will be glad if those county secretaries who have not already done so will now forward to the Secretary, B.B.K.A., 12, Hanover-square, W., copies of the instructions at present issued to their experts.

The next meeting of the Council was fixed for November 20.

GLAMORGANSHIRE B.K.A.

CONVERSAZIONE AT CARDIFF.

A most successful and enjoyable conversazione was held on Thursday, October 23, at the Y.M.C.A. Lecture Hall, Cardiff.

It was preceded by a meeting of the General Committee, when the Secretary announced that after an existence of only four months the number of members relatively exceeded that of some of the old-established county associations. The kindness of Professor Haycroft (University College) and other gentlemen enabled the Committee to arrange a microscopical display of the structure of the honey bee, about twenty-four instruments being employed. Excellent specimens of bee-appliances were kindly sent by Messrs. Lee & Son, Meadows, and Taylor. These, together with a good sample of honey in comb and jars, and an observatory hive, were tastefully arranged round the hall.

There was a crowded attendance when Major-General H. H. Lee rose to make a brief introductory speech. He said there was something beyond the monetary aspect of the question to be considered, and he submitted that bee-keeping added much to the charm and the amenities of life. As a pastime it would compare favourably with cricket and football, and hence it appealed to him, while

on the business side of the question it should be known that an enormous amount of honey was imported which might as well be produced at home.

Mr. W. Goodwin Preece then gave an interesting lecture, illustrated by excellent lantern photographs.

Light refreshments were served, and the proceedings concluded with a programme of vocal and instrumental music charmingly rendered by Miss Hilda Evans (Royal Welsh Ladies' Choir), Mr. R. V. Pierson (solo flute), and the Goodwillie Singers, a male quartette who won great applause by their refined unaccompanied part singing.—W. RICHARDS, *Hon. Sec., Gabalfa, Cardiff.*

MR. T. W. COWAN IN BRITISH COLUMBIA.

The regular monthly meeting of the Natural History Society of British Columbia was held in the Parliament Building, Victoria, B.C., and was largely attended, many ladies being present. After the minutes of the previous meeting had been read, and some specimens of wood from Alaska had been submitted for inspection, the Rev. Canon Beanlands called the attention of members to the fact that they had with them that evening a distinguished visitor who was well-known the world over as an eminent authority on the subject of bees, and he would ask the members to suspend the standing orders of business, and request Mr. T. W. Cowan to address them on any topic he might think of interest to them. Upon motion this was carried unanimously, and for upwards of an hour Mr. Cowan kept the attention of the audience, who were deeply interested in all the lecturer had to say. Mr. Cowan gave a brief description of the natural history of bees, and then alluded to their habits and to the modern methods of bee-keeping. The most interesting part of the discourse was that relating to bees as fertilisers of blossoms, and it was something quite new for many of those present to learn how dependent we are upon bees for much of the fruit we enjoy. Mr. Cowan spoke without notes or reference of any kind, and at the conclusion of his address apologised for taking up so much time, but said that he had only touched the fringe of the subject, and invited those present to ask any questions. A number of questions were asked, and satisfactorily answered by the lecturer. Canon Beanlands, who moved a vote of thanks, which was seconded by Mr. Robinson, said that they had enjoyed that evening one of the most interesting lectures it had been his privilege to attend, and they were much indebted to Mr. Cowan from the prompt manner in which he had responded to their request. The vote of thanks was carried by acclamation, and it being nearly eleven o'clock, the members separated, having adjourned the business to the next meeting.

As a sequel to this, at the regular meeting of the society, held September 22, Mr. T. W. Cowan was unanimously elected an honorary member of the Natural History Society of British Columbia.

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, D.SC., F.R.M.S., F.Z.S., F.E.S., ETC.

Leipziger Bienenzeitung.—In the museum at Cairo there is a bee which sits with outspread wings on a band which encircles a mummy. Doubtless the insect was caught at the moment when the corpse was being preserved with gum and palm oil. Time has not changed the beautiful structure of the bee, it still appears alive and to be just in readiness to fly away.

Leipziger Bienenzeitung.—A bee-keeper at the village of Hosterhof (Saxony) has a colony of which some of the drones have *white* eyes. The year before he had installed a young queen, which produced the anomaly. This shows how easily any especial qualities of the queen bees are inherited, and proves the great need there is of care in choosing a queen.

Bienenwirthschaftliches Centralblatt.—This paper gives an article from Stade, in the province of Hanover, on the planting of trees useful to bees. Advice is given to apply to the Commissioner of Roads, requesting that such trees as apple, morella cherry, maple, mountain ash, aspens, acacias, and, above all, limes, might be planted along the roads. The town of Stade has four lovely lime avenues leading from the gates towards the country. Maples are very useful, coming in after the fruit trees, and also hardy, attaining sometimes to an age of 100 years. The lime and the buckwheat flower at the same time. The bees gather honey from the buckwheat in the morning, and from the limes in the latter part of the day, and excellent honey it is.

The writer urges each bee-keeper to plant what trees he can in his own garden, as well as to advocate the public establishment of useful trees in the roads and lanes.

The same.—Another writer gives his experience with a quarter of an acre of land which was first sown with rape, upon which the bees worked eagerly (the green fodder was given to a goat), then with mixed flower seeds, among which was a quantity of phazalia. This kept the bees at work well into the autumn, and the colonies grew and prospered abundantly.

The same.—It is known that honey will keep good for years, but it is new to learn that it can be preserved for several hundred years. Lately, in digging out the cellars for a new building in Berlin, the workmen came upon a quantity of burnt rubbish, which, upon examination, was considered to be traceable to the great fire of 1384, which

destroyed nearly the whole of Berlin. Amongst the ashes a vessel was found containing a sticky substance, which proved on investigation to be honey, and this had been preserved in the débris of the fire for more than 500 years.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department reports of Associations, Shows, Meetings, Echoes, Queries' Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

NOTES BY THE WAY.

[4932.] *Selling Honey.*—Having in my last "Notes" referred (on page 423) to the price of honey, I was pleased to see the letter of Mr. Simkins on "Bees in Warwickshire," on same page, where at the end your correspondent mentions having realised 1s. per jar for his extracted honey, while another writer, "Gade," in same issue (page 428) mentions having realised 10s. 6d. per dozen for first-grade sections of honey. I have not asked more than 10s. per dozen for best (glazed) sections, and this from regular customers. One of the largest of these customers had always paid me 10s. per dozen without a grumble till last year at the close of one of the large exhibitions held in the Agricultural Hall, London. I was sending them the exhibit (trophy), and leaving the honey in the hall ready for dispatch per "carriers." Of course it was legibly addressed to the firm who had purchased it. The consequence was that some one amongst the exhibitors, no doubt thinking to secure the supplying of the firm in question, offered sections, glazed and delivered to them, 1s. per dozen lower than they had been paying me, and the result was that I had to reduce my price to 9s. 6d. per dozen in order to retain their custom. This then is how some bee-keepers are ever ready to "spoil the trade" of his brother beekeeper. This system of "cutting" is one of the most disadvantageous results of "showing." You either have to pay carriage of goods—perhaps a hundred miles—home, and then back again maybe past the doors of the hall where they have been staged, or stand the chance of a mean trick, a bit of "sharp practice," that may cost you pounds in the long run. Such, however, is the "brotherhood of man" where the chance of doing another a good (?) turn comes in.

Current Prices.—The past volumes of the B.B.J. bear witness that I have ever endeavoured to inculcate friendly co-operation amongst bee-keepers, to secure a fair market for our produce, and as "our JOURNAL" is the only medium of conference we have, I hope that every one who has the well-being and well-doing of our small industry at heart will stand up for a "fair price" for their bee-produce. We should all make a practice of grading sections, so that the whole parcel consigned should be saleable at the retailer's counter — not a few lightweight sections slipped in at full-weight price. By fair dealing of this kind only can customers be held year after year. Your correspondents, Mr. Homersham and "W. H. K.," seem both able to dispose of their honey at retail prices, one at 10d., the other at 1s. per lb. jar, and what these two bee-keepers have done others located in spots where the "British public" passes their doors can no doubt do also, with profit to themselves and the craft. The more bee-keepers in our ranks who retail, the less there will be to compete and, too often, undersell in the wholesale market. But there are so many places where very few people pass the bee-keepers' home that such cases as are quoted are few and far between, and those less favourably situated have to seek a market in the world's emporium.

Showing Honey.—I have been asked to write on "Showing Honey." One inquirer says "does it pay?" another asks me to "give approximate cost of staging a trophy of honey." This is rather a big order, and I feel that my version will not enthuse the would-be honey-showing bee-keeper. Anyway I will enumerate the cost (about) of my attempt at the "Dairy Show" of 1902. (1.) Entry fee, 2s. 6d. (2.) One day's work, *i.e.*, selecting and preparing exhibit beyond ordinary market requirements, 5s. (3.) Cost of gross carriage, 5s. (4.) Journey to Agricultural Hall to stage, 8s. 6d. (5.) Expenses of lodging, &c., in town and return journey, 9s. 6d. (6.) Loss of two days' work, 10s. Return rail journey to town to repack the exhibits and expenses in London, 9s. 6d. (7.) Return rail journey, 6s.; loss of one day, 5s. Cost of carriage of glass and extras for staging the "trophy," railway and carrier 1s. 6d. This gives a total of £3 1s. 6d. squandered in a competition which resulted in a "high commend." I have charged 5s. per day (ordinary mechanic's wages) and nothing for food, as one requires food either at home or abroad, and the return journey home cost slightly more than staying in town; but I had the two full days at home, so that it was the cheapest for me to return. Besides, I was very busy with home work at the time; so that anyone who contemplates entering the lists another season, if living some sixty miles from town and a considerable distance from railway station, will have some estimate of probable cost. Other letters have reached me animadverting on the unfairness of bee-keepers having to compete with manufacturers

and merchants in both honey and wax classes. Some say they shall transfer their orders to the appliance dealers who are non-competitors with their customers in the honey and wax classes.

Wax Classes.—I consider these manufacturers' classes are of no real value to bee-keepers. To show this let us suppose two exhibits of suitable cakes for retail trade. If one is a good "commercial" wax, and the other of first-class quality, the last exhibit gets the award; but when the grocer or oilman inquires of the bee-keeper how much he can supply and the price per pound, the answer of the exhibitor is "He has none to sell." He will not even part with the exhibit, or he may sell his next year's prizes. In this way all one has to do is to get an extra good sample of wax, and "trot it out" to show after show as each year comes round. The same with bottles of mead and honey-vinegar. One sees the same old stuff staged year after year. Even so-called "designs in honeycomb" have become crystalised beyond damage by rail. Yet they still put in an appearance; aye, and by some inexplicable law manage to secure the awards. The awards in mead and vinegar classes are given to mixtures which are bright and clear. No tasting in this century! A century ago the awards were given for flavour and bouquet, as well as colour or brightness.

The honey merchant who buys a large quantity of honey during the season is open to the suspicion or conjecture by rival competitors that he may be exhibiting other than the produce of his own bees. At some shows, of course, this restriction does not apply, though it is distinctly stated in most of our schedules, "all honey shall be the produce of the exhibitors' own bees," and the same conjecture arises in one's mind in reference to the wax classes, where wax merchants compete with beekeepers.

Grouping Counties.—The idea of grouping counties will probably come sooner than some expect, seeing that the permanent settling-down of the "Royal" show in the metropolitan district will enhance the importance of some of the other agricultural societies; and by bee-keepers' associations utilising these societies, such as the "Bath and West" and "Royal Counties," the county associations in which these shows take place can easily confine the honey prizes to the contracting counties who promote the show. Again, when one reads the remarks of some, who call prominent showmen "prize hunters" and "grabbers," they are led to ask why the committees compile their schedules to admit bee-keepers beyond their own county limits? Also why do secretaries of these associations write asking "prominent" exhibitors to make entries? Will someone kindly explain these things, and make them easily understood by untutored minds like my own?—W. Woodley, *Beedon, Newbury.*

SELLING HONEY.

A HONEY MARKET 120 YEARS AGO.

[4933.] In "Life and Letters of Gilbert White, of Selborne," written and edited by his great-grand-nephew, Mr. Rasliegh Holt-White, and published by Murray last year, there is the following passage, under date October 4, 1783, copied from the naturalist's journal:—"This day has been at Selborne the honey market; for a person from Chart came over with a cart, to whom all the villagers round brought their hives, and sold their contents. Combs were sold last year at about 3¾d. per lb.; this year from 3¾d. to 4d."—E. D. Till, *Eynsford.*

(*Correspondence continued on page* 446.)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

We have special pleasure in illustrating on next page the apiary of the Rev. W. Head, as belonging to one of the best friends of our industry. A thoroughly good bee-keeper in all respects, one who makes his own hives and many of his own appliances, he produces honey and markets it himself with profit. Not only so, but he gives freely of his knowledge to others. For the rest the following "notes" need no addition from us:—

"Seven years ago my youngest daughter, aged seven, had given to her a swarm of bees in an old skep, which, from some cause or other—probably lack of food—failed to survive through the ensuing winter. The next summer the hive was taken possession of by a small truant swarm, or cast, and I promptly invested in the 'Guide Book,' in order to find out how to deal with them. I made 25 lb. of sugar into syrup to feed them up with, but most of it was carried off by foragers from other bee-gardens, so that before the winter was over this lot also had perished. I had, however, by this time become highly interested in the subject of bees by studying the 'Guide Book,' and I resolved to make a start on modern lines with the frame-hive. I had been told that *purchased* bees were unlucky; but I have a habit of running counter to these ancient sayings, and, therefore, bought two stocks in the early spring of 1897, and a swarm later on in the same year. From these I had five swarms the same season—the first I lost. It came off on a Sunday morning, and Whit Sunday, too. I had extra services to take at my two churches, and could not look after them myself properly in consequence, with the result that they left the hiving skep about noon, and flew off I know not whither. The second, third, and fourth I secured, though not without trouble; the fifth I lost mainly through ignorance. Not having a hive ready, I left the swarm in the skep covered over with a cloth to prevent their escape, and found most of them either drowned or suffocated when I went to hive them. *Experientia docet.* I only mention

these details that others who are beginning may avoid the mistakes I made. I had never seen a swarm of bees in my life until I saw that one on the Whit-Sunday morning, so that my experience has been neither long nor wide.

"When I first began with my hobby, I purchased a couple of hives, and made some more from the same pattern. But when the illustrations and measurements of the 'W.B.C.' hive were published in BRITISH BEE JOURNAL, I was attracted by them, and immediately set about the construction of one, which I liked so much that I determined to use no others. All I have since made have been on the same general plan, and my original kind I have either sold or given away. I find much pleasure in making my own apparatus and a considerable saving as well. I adhere strictly to standard measurements in hives, though in one or two points I have modified the regular 'W. B. C.' design, *e.g.*, I have my stand and floorboard in one; I do not use metal runners to carry the frames of broodnest, but chamfer the outer edge of back and front, leaving only $\frac{1}{8}$ in. for the ends to rest on; and I make my roofs with sides deep enough to cover a shallow-frame super. This does away with one lift, and gives weight and stability in windy weather. I have never known a roof lifted off by wind, though we get rough weather occasionally. When putting my hives together, I always use thick paint in every joint before nailing up, and I am never troubled, in consequence, with leaky roofs and wet quilts.

"My hives have a south aspect, with a thick hedge on the west and buildings on the north side. Forage is fairly abundant in the near neighbourhood in the shape of fruit blossom, white clover, &c., and some heather may be had further afield. This latter crop, however, is very precarious. In six years I have only had one really good heather yield, *i.e.*, 229 lb. from six hives; last year I got about 20 lb.; this year I have secured nothing.

"I find no trouble comparatively in disposing of all the surplus I secure at remunerative prices. I only sell my best honey, anything thin or unripe is either consumed at home or given back to the bees. Thus I keep my old customers and constantly secure new ones. Of course, I put up all honey for sale in uniform jars with my own special label attached, this latter acts both as a guarantee and as an advertisement. People ask for my honey at the retailers, and *see that they get it.*

"I have tried to stir up interest in modern methods among my skeppist parishioners, and

THE REV. W. HEAD'S APIARY, WITNEY-ON-WYE, HEREFORDSHIRE.

with some little success. But not all of them are willing to throw into the work the energy it deserves, and will well repay. They take in but slowly the doctrine that full sheets of foundation, whether in brood nest or super, are a splendid investment. They know that bees can produce wax, but they do not know —or they ignore—what it costs in time and honey to do it. Thus, to save 2s. 6d. in May they sacrifice 10s. in August.

"I regret to say that I am no stranger to that dreaded foe, foul brood. For four years I have had to fight it, and I am not certain yet that victory is with me, though, as I have seen no signs of its presence this autumn I am hoping the battle is won.

"I fear I am occupying space to very little advantage, but I should like to bear witness to the help I have received from the B.B. JOURNAL and *Record*. I have rarely had to ask a question in either, as I find almost every conceivable point dealt with at one time or another; while the contributed articles—scientific, sentimental, practical, and fanciful—always contain something to reward their careful perusal.

"My experience has taught me the value of the following things:—Order, foresight, enterprise, personal attention, carefully kept memoranda."

CORRESPONDENCE.

(*Continued from page* 444)

PRICE OF HONEY.

[4934.] My attention has been called to a paragraph in "Notes by the Way" (page 425) referring to mine of a previous issue *re* the price of honey. Mr. Woodley has evidently rather misunderstood me. What I was alluding to was an advertisement asking for "well-filled sections to be delivered free," and offering 6s. per dozen for them; not to sections being offered for sale at that price. In Mr. Woodley's "Notes" he leads one to think that 6s. per dozen was as much as the sections offered were worth, and that he was referring to a particular lot of honey that had been offered at that price. In summing up the expenses, &c., in handling the same he describes an imaginary case, observing "Quite a dozen of the little lumps of honey are detached from the wood in spite of spring crates," &c. Now the advertisement distinctly asked for well-filled sections, which I take to mean those weighing 16 oz. at least, and attached to the wood on all four sides. Such sections would never become detached from the wood if spring-crates were used, unless with extraordinary rough usage, and to call "6s. a dozen as much as the stuff was worth" in a season like this is, to my mind, wide of the mark, especially as good, well-filled sections are being sold in many of our large towns for 1s. each. After all, the bee-keeper has to produce the stuff, not the dealer. He has, first, to provide the bees, buy or make a hive to put them in, foundation to furnish the frames and sections, rent a garden or plot of land to stand the bees on, and give his time in attending and caring for them. And do all this to produce sections for sale, and at 6s. per dozen. "well filled.' Where does the poor bee-keeper come in?—A GODSLAND, *Bovey Tracey, Devon.*

BEES IN WARWICKSHIRE.

[4935.] Herewith I send you a Warwickshire report, which, though not so glowing as that of Mr. C. Wells on page 416 (who might have told us what his average take per hive really was), may tend to encourage those who have only done moderately well this most unpropitious season. From three hives which I managed for a neighbour I took 70 lb. of honey in shallow-frames; for another neighbour, with only one hive, twenty-four completed sections (six of which took a 1st prize) and 6 lb. extracted honey; and from one of my own, twenty-two good sections and 7 lb. extracted honey—the others averaging 23 lb. per hive, all got from shallow-frames. The doings of one stock somewhat surprised me. On June 21 I united two "casts" weighing respectively $2\frac{3}{4}$ lb. and $3\frac{1}{4}$ lb.—6 lb. in all. The bees were hived on two combs partly filled with honey, and eight frames of foundation, and fed. On July 4 I found brood, and four days later, on the 8th, put on rack of sections. On the 28th took out six of the latter for exhibition, and gained second prize, and later on nine more sections were removed, and this is now one of the best stocks in my apiary.

Our two principal supplies came from charlock (of which there were some really grand crops) and limes, for, although white clover blossomed well, the bees did not work at all freely on it. The early fruit blossom was lost through inclement weather.

The hives are all in splendid condition for wintering, being packed full of both bees and honey, even to the outside frames, so I hope to make a great start for season 1903. I may mention that I never rob the brood chambers. —C. H. TOMLINSON, *Hollywood.*

THE CONFERENCE OF DELEGATES.

[4936.] I was painfully surprised on reading Mr. Hill's remarks at the Conference, reported on p. 422 of B.B.J., Oct. 23, because I know the attack was intended for myself. I and my family are well known both to the appliance-dealer mentioned and to Mr. Wootton, who represented the Derbyshire B.K.A. at the conference held at the Shrewsbury Show on August 23, 1893. I also see by referring to B.B.J. of September 7, 1893, the following names appear as successful exhibitors of sections at the same show: Messrs. Horton,

Carver, Simpson, Nickels, Cartwright, Jones, Palmer, Bradley, Griffiths, Carpenter, Hammonds, and Croxton. Now, Sir, if any of the above-named exhibitors can prove that I or any of my family were in Shrewsbury during the show, or that I had honey of any kind from the same show, my offer of nine years ago stands good to-day—*i.e.*, I will give £5 to the Children's Hospital. Being only a working man, I regret being unable at present to take the steps I should like to do. I admire the reply of the "exhibitor" quoted by Mr. Hill; nor was I aware, before reading his remarks on page 422, of the part he played in the matter. Moreover, the section "cut" by the judge from the exhibit Mr. Hill referred to was sent to you, Mr. Editor, by our late secretary, Mr. Atkins, for your opinion (I received 1s. for it from the Association), and your reply, to the effect that the honey was from white clover, was read at the first meeting of the Committee after our show. From that time till now—some nine years—I have never heard a word, though Mr. Hill and myself have worked together on the Committee of the D.B.K.A. for the whole time, and we have only had "stamped sections" for four years. Referring to Mr. Hill's statement that no sainfoin is grown in our county, he well knows Mr. Stone grows it with success. I may say I welcome the stamped sections, and continue to produce a few for exhibition, though I have no sale for them, and they do not pay. I have had to sell my best glazed sections after the shows were over at 8s. per dozen. I could say a good deal more about shows and showing, and about the use of stamped and non-stamped sections by exhibitors, but I leave the matter where it stands, trusting you will give this publication for the sake of justice to all. I send my name, &c. (not for publication). Mud has been thrown; some will stick; so I sign myself—"THE ACCUSED" (Member of the D.B.K.A.).

EXPERTS AND FOUL BROOD.

[4937.] Your correspondent, "Herbs" (4922, page 427), makes a very grave charge against the expert employed by the Association of which he must be a member. He places the sole cause of his disaster to the hands of the expert. Doubtless the latter did all he could—according to his ability—to serve the requirements of that particular member, and render him good service in searching for the queen he was desirous to be rid of. But just fancy keeping a hive open over two hours at a stretch looking for a queen! this is sufficient in itself to chill the brood, and thus indirectly lead to the result complained of. If bee-keepers generally would take more care in keeping the frames covered while making their examinations, much of the mischief would be avoided. I consider "Herbs" must take one-half of the blame to himself, and in future be more careful when examining his hives.—J. S. LAWTON, *Bridgnorth, October* 26.

[Without entering further into the matter, we may point out that foul brood is not generated from "chilled" brood.—EDS.]

BEE-HIVE CURIOSITIES

FOR LANTERN SLIDES.

[4938] Referring to the "Bee-hive Curiosity," illustrated on page 395 of B.B.J., on the 2nd ult., and others of a similar kind, which have appeared from time to time in your columns, I should be very glad to know if any of your correspondents possess lantern slides of the same? or, failing that, the negatives from which such could be made? I find that "curiosities" of a like kind to those in question invariably have an attraction for audiences, either when shown on the lantern screen during a lecture or at the end of it. I enclose my name and address, so that perhaps some of your readers might write me on the subject.—D. MAPPIN, *Headley Park, Epsom.*

THE HUNTS B.K.A. AND ITS WORK,

PAST, PRESENT, AND FUTURE.

(*Read at a Conference of Members on October* 18, *by Allen Sharp*)

The heading of my paper, as you will observe, is a very broad one. I do not, however, intend to weary you with a detailed account of work already accomplished. What concerns us most just now, and what we are anxious to discuss to-day, is the future work of the Hunts Bee-keepers' Association. But before we can decide upon any definite course of action it may be well to briefly review the past and carefully consider the present; we shall then be the better able to formulate our plans for future usefulness. It is now twenty years since this Association came into existence, its object being to encourage modern methods of bee-keeping, and in order to accomplish that object lectures have been given all over the county; bee-keepers have been visited by experts who have given practical instruction in the management of bees, dealing with foul brood, and so on. Shows, also, have been held where the best methods of putting up honey in an attractive and saleable form have been fully demonstrated, and it cannot be denied that good and useful work has been accomplished during its twenty years of labour. Not only so, but the cause of bee-keeping has been constantly moving onwards, and, in consequence, bee-keeping at the present time is an entirely different matter to what it was when the Association was first formed. The industry has grown into an important business, is still growing, and still capable of further extension. But, speaking for ourselves, I may say that, while we—as bee-keepers—have made rapid and sound progress, we have as an Association remained

practically stationary ; that is to say, we have been moving in exactly the same groove in which we started, with but slight variation.

The result is that bee-keeping has got ahead of our Association, and if we carefully consider our present position we must, I think, admit that the Hunts B.K.A. has to some extent lost touch of bee-keepers, with the inevitable and regrettable result that our membership has declined. I say this advisedly, because there never was a time when we had a wider scope for useful work than the present. Never before was the need so great for real Association work in its true sense as now. But to make our Association a success it is necessary that we should be in a position to offer to every member some benefit in return for the money he is asked to subscribe, and if we can do that, as I believe we can, there is not the slightest doubt that our membership will rapidly increase, and our usefulness correspondingly extend. But we must not forget that membership ought to be actuated by higher motives than mere individual gain.

All who join the Association should do so with the feeling that they are helping a cause which will work for the common good of all concerned.

The Committee have long felt the necessity for putting the Association on a new footing, and thus bringing it more in conformity with present-day needs and requirements. But what to do and how to do it are questions which have been seriously considered and freely discussed on more than one occasion. The first move we made was at the last annual meeting, when it was resolved that instead of one meeting a year we would hold at least four, and that two out of the four should take place at members' apiaries in different parts of the county, to which all members should be invited for interchange of ideas, discussion, and so on. The first of these meetings took place at Brampton on August 16. I do not feel at liberty to say much about that meeting, as it was held at my house, but I may, perhaps, be pardoned for observing that it proved a great success—greater than was anticipated—and there is no doubt that such meetings will become very popular and beneficial. At the meeting referred to we spent four or five hours in interesting discussion and pleasant bee-chat. Amongst other matters, that of co-operation was discussed, and under that head were brought forward the following questions:—1. The wholesale price of honey, and how to obtain it. 2. To assist members in case of sickness during the honey season. 3. To assist relatives of deceased member in disposing of bees, &c. 4. To raise a fund in the form of insurance to assist members in the event of their being called upon to pay compensation for damage done by their bees.

These questions were favourably received, and it was the unanimous wish of the meeting that they should be put into operation as early as possible. In response to the request then made, I now have pleasure in laying before you a rough outline for the working of the various matters referred to.

The first question is—The wholesale price of honey, and how to ascertain it. At the present time there is no set price for honey. Honey, we are told, is worth what you can make of it. That, no doubt, is true, but not satisfactory. As we all know, the season rules to a great extent the price of honey ; but it often happens that in the same year and in the same district where exactly the same class of honey is produced, there is a considerable difference in the wholesale prices realised—a fact owing almost entirely to some bee-keepers not knowing what is being done by others. I therefore suggest that during the months of June, July, and August each member who sells honey wholesale shall on the 1st and 15th of each of the said months send a return to the secretary, stating the quantity and quality of the honey he has sold, and the price realised during the fortnight ending the 15th or last of the month, as the case may be. In such return it should be made clear whether buyer or seller finds tins, and pays carriage in the case of extracted honey, and if in sections it should be notified whether glazed or unglazed. On receipt of such returns, the secretary would write out a return embodying the whole lot, showing how many lots of honey had been sold, how much in each lot, and whether first or second grade, and price realised, but no names given, the secretary being required to regard as strictly private the names of all members who send in returns. Any one requiring such returns to make application to the secretary. The secretary would thus be saved the trouble of sending out unnecessary returns. Thus no man need fear that his business concerns will be made public. By thus suppressing names no one receiving a return would know who had supplied the information to the secretary, but we should see at a glance what was going on in the county, and this would be of great benefit to us all.

The next question is that of rendering help to sick members. It is suggested that if a member becomes unable to attend to his bees, and has no one to assist him, he shall notify the same to the secretary, who shall then arrange for members of the Association to manage such sick member's bees until his recovery, free of charge. Should there at any time be any difficulty in carrying out the above, the secretary shall have the power to appoint some one to do the necessary work and remunerate him out of the general funds of the Association. It is, however, highly desirable that all assistance shall be voluntary and gratis. Every member should feel that it is his duty to help a fellow-member in the time of need, with the assurance that he himself would receive the same help if at any time required.

In the case of a member dying and leaving his bees to be sold, the Association shall, on receiving such information from the proper quarter, take steps to dispose of the same. There is no doubt that an apiary of a deceased member, offered for sale by the Association, would realise a much better price than if left to be dealt with by people who know nothing about bees, to say nothing about the worry and trouble it would save the relatives.

There is only one other question to be considered, viz., insurance. It now and then happens—not often by any means—that bees, from some cause or other, generally through the ignorance of some one, become troublesome, and sting anybody and anything that happens to go in their way; and we have on record cases—happily few in number—where serious injury has been done to both man and beast through bees, in which cases compensation has been claimed. I have been a bee-keeper in Hunts for the past twenty-five years, but have never known or heard of such a case in the whole county. But, notwithstanding this freedom from trouble in that line, it is just as well to be prepared for that which is least expected. Let us then arrange that each member shall pay to the secretary so much per hive per annum (whatever sum may be agreed upon), the money thus raised to form an insurance fund; and if any member is called upon to pay compensation for damage done by his bees, such compensation shall be paid out of the said fund so far as the amount in hand will permit. We would guarantee no fixed amount, but only agree to pay according to the extent of our means, *i.e*, the sum in hand. There are only about three months (probably five weeks would be nearer the mark) during the year when there is the slightest risk of bees doing damage. We must therefore make it plain that whatever claims there are will be duly considered, but none will be paid until, say, the month of October. If there is one claim, and there are funds enough in hand to cover it, the claim will be paid in full; but if the claim exceeds the sum available, well, then the matter is quite simple: the member called upon to pay the claim would take all we could give him and make up the deficiency himself. In the event of more than one claim, and the total amount required to meet the case being in excess of the total amount in hand, in that case each one would be paid *pro rata* according to the funds in hand. But I don't think that there will be any difficulty in that direction. Judging from past experience, I should say that, if we all pay, say, 1d. or so per hive per annum, we shall soon have a fund large enough to help us out of any difficulty that is ever likely to occur. I have not attempted to do more than give a rough outline of the questions referred to. If they commend themselves to you, freely discuss them; make any necessary alterations; and appoint a sub-committee to give them the final polish, and put them into operation at once. I promised to be brief, otherwise I should have said a great deal more.

Queries and Replies.

[2995.] *Bee Candy Cast Out of Hives.*—Would you kindly give me your opinion in the following? On October 23 I gave each of my hives (twelve in number) a cake of soft candy (medicated), but on looking at the hives on the following day I found a lot of white powder, which on examination was found to be the candy given. I have watched the bees for fully an hour busy bringing out the candy, and depositing the same on the floor-board. 1. Can you give me any reason for this? The candy was not my own make, but was bought from a well-known firm. 2. What am I to do? I have about 20 lb. of it left. I am going away from home for three months, and wanted to leave the bees with plenty of candy-food. 3. How is a frame prepared for holding syrup? 4. Would ordinary candy one buys at a confectioner's be of any good to place in the hives?—REDLAR, *Lymington, October* 27.

REPLY.—1. The fault is obviously in the candy, which is coarse and hard in grain, instead of soft, smooth, and buttery. What you call "white powder" is the hard granules of badly-made candy, which the bees cannot store in the comb, and carry out as being useless for food. 2. The hard candy might be used in making syrup-food for spring use. 3. If you mean a frame on the plan of Simmins' dry-sugar feeder, it only needs to nail the boards on both sides of a frame, leaving a ¼-in. space at top on one side as an entrance to the hollow space between the two boards. Care must be taken to make the feeder water-tight, and the insides of the boards should be left rough to afford foothold for the bees when feeding. 4. It is not suitable bee-food.

[2996] *Marketable Shape for Beeswax in Small Cakes.*—As a regular reader of the JOURNAL, I ask would our Editors or some practical contributor to give us information with regard to the best way of putting beeswax into marketable and convenient shape or form for retailing? Is the square chocolate-cream form suitable? or what is the best mould, and where is it procurable? I am sure many readers besides myself will appreciate this information. The Editors or any other of experience.—PURE BEESWAX, *Kinross, N.B., October* 29.

REPLY.—We cannot tell you where to procure the "best mould" for wax-cakes. It is a moot point which is best, and our personal view could only be given for what it is worth. It is, however, certain that a rather thick and strong cake, weighing as near an ounce as can be sold at 1d., is a very suitable

cake for the counter trade. We prefer round to square shape, without any sharp edges to chip off in using. Some cakes should be made double the size of above, to sell at 2d.

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** A correspondent writes as follows:—"I am writing to ask if you can say whether there is any opening in the bee industry of this country for a 'manager' or 'head apiarist.' I have had two years' varied practical experience with a prominent bee-keeper in England, and am well up in all branches of apiary work, including honey-production, putting up for market, packing, &c., also queen-rearing and general office work. I also understand bee-keepers' book-keeping, commercial travelling, lecturing, &c. Do you think there is any opening for me in England? I imagine most English bee-keepers keep, say, twenty to thirty stocks only—this, of course, would be useless; they would not require a specialist. Are there any apiculturists possessing a sufficient number of hives who could afford me? Any information would be greatly valued."

[Not being able to furnish the information asked for, we insert the above, and should any reader desire to communicate with the writer (whose name and address we hold) letters addressed "Apiarist" to this office will be duly forwarded.—EDS.]

G. GELDARD (Liverpool).—*Bee Districts near Liverpool.*—Without being able to promise more help by adopting the very unusual course of repeating in print a request that has brought no response on its first insertion, we suggest that you might write to Mr. R. Anderton, Stone Bridge Farm, West Derby, or to Mr. Wm. Forrester, Huyton, near Liverpool, both of whom are bee-men who know their districts well for honey-producing. Refer also to report of show at Preston in B.B.J. of September 11 last (page 361), for names of local prize winners.

J. WORLEY (Sheffield). — *Cardboard Box-makers.*—The advertiser whose name you have mislaid is no doubt the Safety Paper Box Co., Borough High-street, London, S.E.

GWENLEVI (Weybridge).—*Insurance for Bee-keepers.*—It is an error to suppose that bees are insured against foul brood under the scheme referred to. Write to Mr. E. H. Young, Secretary B.B.K.A., 12, Hanover-square, W., for particulars of Insurance for bee-keepers.

P. W. (Netteswell, Essex).—*Uniting Driven Bees.*—1. On referring to the MS. we find that the words which you say "have been left out" in Query 2989 do not appear at all in your copy. 2. We can give no reason for the failure in one case and success in the other.

G. LAYCOCK (Cowling).—*Dead Queen Cast Out.*—The queen sent has no doubt been "balled" for a long time before being killed outright. All pubescence has gone from the thorax and abdomen, and both wings appear to have been literally bitten away piecemeal. The insect is too dry for *post-mortem*, but we judge it to be a fertile (Ligurian) queen.

P. H. W. (South Devon). — *What is a "Complete Frame-hive for General Use"?* —It would be "sending coals to Newcastle" for us to occupy space in describing the various parts of a modern frame-hive. As you refer to yourself as "an interested amateur," we advise the purchase of a good "Guide Book" as an indispensable adjunct to bee-keeping; also to procure a catalogue from one of our leading advertisers. Possessed of these two items of bee-literature, you will learn all about a complete frame-hive.

NOVICE (Alfreton).—*Amount of Stores for Wintering Bees in Skep.*—1. The only criterion under circumstances stated is to get an approximate weight of actual food. As combs are "old and black," and may contain much pollen, the skep should weigh at least 25 lb. gross to be safe for wintering. 2. About 1½ in. is a suitable width for entrance to frame-hive in winter.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

"J." (Wallingford). — The few cells—other than empty ones—in comb contain foul brood, and it would be sheer folly to use them again. We should either melt down for wax, or burn all such combs.

Honey Samples.

— ALFRED (Dudley).—1. There is nothing in sample of granulated honey to cause us to doubt its genuineness. 2. We cannot say why the chemist referred to gives a contrary opinion, beyond the fact that he appears to know very little about honey.

W. A. W. (Guildford).—The granulated honey received is from mixed sources—mainly white clover. It is of very good quality.

*** *Several letters and queries are held over for want of room.*

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

THE NEW SHOW YARD.

We understand that the grouping of counties as proposed for the new classification for honey at the forthcoming meeting of the Royal Agricultural Society of England is likely to meet with the full approval of the "Prizes Committee" of that Society, and it is accordingly suggested that bee-keepers' associations or intending exhibitors having any proposals to make in regard thereto will address the same to the Secretary B.B.K.A., 12, Hanover-square, without delay, as the Council will shortly proceed to draft the complete prize schedule upon the new lines.

In view also of the fact that many societies are uniting their efforts to ensure the success of the "Royal" show on its new and permanent site near London, it will be well for bee-keepers to consider what can be done in this direction, in order to keep pace with the progress made by other societies and in the interest of the bee industry generally.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of October, 1902, was £625.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

****** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.***

COMMENTS ON CURRENT TOPICS.

[4939.] *Ladies* v. *Gentlemen.*—One of our most prominent bee-keepers a year or two ago wrote an article on our hobby as an occupation for the gentler sex, and at the time I felt perturbed, as I dreaded that a great and mighty Amazonian host might join the ranks and oust all of us who are mere men. The lapse of time, perhaps, or the discovery that affairs have undergone no serious revolution, have soothed my nerves and enables me now to view the matter with perfect equanimity, and I feel no perturbation of spirit even when reading over the list of new experts on page 381. *Thirty-six* ladies have obtained the much coveted certificate, as against *twenty-six* gentlemen. That must mean that the cult is extending and finding special favour amongst women, or that those going forward give more attention to preparation for the oral and written part, as well as the manipulation of hives, so as to be better fitted for passing the examination with credit. I understand they are apt pupils, and, as might be expected of their sex, readier to respond fully and promptly to the questions of the examiner. They are tactful and full of resource in manipulation, and their smart and active, yet neat and gentle, movements tell in their favour in capturing queens and handling frames. Even in regard to the heavier and more trying calls on their strength and endurance, I remember one of the examiners once wrote words of high praise and commendation.

Hiving by Entrance.—It is sometimes advised that bees from a skep or swarm-box should be shaken into a bar-frame hive from above, throwing them down between the top-bars. It is presumed that some of the frames are first withdrawn, and the space between those left considerably widened, to allow the mass of bees to fall to the floor, as otherwise most of them would lie on the top of the bars. Even with this precaution, it often makes a messy job, and if they are slow to leave the skep or swarm-box, requiring several shakes and bumps to dislodge them, those first thrown boil up so much that if the operator's courage oozes out he is in danger of scamping the work and scampering off, regardless of how he places on the quilt, so that frequently they take up their abode in the hive roof. Cases of this kind are so common that novices should, I think, be advised to do all their hiving or transferring by shaking the bees on an enlarged platform in front of the entrance, which should be opened to its full capacity to allow the bees to walk, or rather, run in. After the first few pioneers have discovered the narrow way leading to their new residence, they set up a charming buzz of glad content, and this sound is taken up by the whole throng, until soon every head is inclined in the direction of home, sweet home. I think this latter plan is preferable to the overhead hiving, as with it there is less chance of an upset, it is an easier and safer plan, the treatment of the bees is gentler, there is less chance of the bees decamping, and no likelihood of injuring the queen, as sometimes happens when the bees are roughly thrown from above.

The Fall of the Season.—Nowhere, perhaps, in all our lovely island can a fairer scene be witnessed than along the valley of the river

Spey from Ballindalloch to Craigellachie in the closing days of October. What a delightful picture of grace and loveliness the woodlands there were during the period of transition! From a wealth of sylvan green they underwent a gradual but wonderful transformation, each successive change making the scene one of exquisite beauty, while the trees were dressed in their coat of russet brown, intermixed with all the varying shades and tints of yellow and gold and crimson which mark the fall of the leaf. The wealth of leafage was seen slowly consuming away in a many-coloured death. One tree was clothed in a gown of warm russet freaked with gold; another showed all patches and streaks of yellow flame, mingled with the green that still lingered as if loath to die. Anon wide stretches were seen showing sanguine flushes like a golden sunset; while side by side were patches austerely brown, varied by spots where Nature had placed a fiery finger on the leaves, or where by some freak she had severely touched them with "withered hue and sere." The elm flared out a very vivid yellow; the poplar became a vista of pale gold; the ash darkened to an almost black hue; the horse-chestnut looked a faded mass of dark green, all tinged with dull grey or faded brown; the plane was a mass of copper bronze; the wild-cherry was robed in scarlet and gold; the rowan became a wealth of crimson leaves and red berries; the maple a flaring purple, tinged with many shades; the larch an auriferous mass of glowing yellow; while the dark and sombre green of the pine and the vivid emerald hue of the spruce made a splendid effect in the background. Unconsciously, perhaps, the gladness of heart engendered by such a wealth of beauty is tinged with a regret at its departure, for already, on this early November day, the woodlands are only bare boughs. Only! Nay; for already the baby Hope is laughing at Decay, and, closely looked at, those bare, naked twigs are all strung with the germs of future leaves, for a full green bud of promise is developed even as the old leaves fall.

Bee-candy.—The state of the brood-nest in too many hives, and more especially the condition of the store cupboard, makes me feel that the coming year will see a good many claims made by the bees on their owners in early spring at a date which will be unsuitable for syrup feeding; so I would council all who have doubts of supplies holding out to try their hand at candy-making. I am no advocate, as a rule, of this form of feeding, and have used none of it for half a dozen years at least; but this exceptional year requires exceptional measures, and so I reproduce a table I compiled some years ago as the fruits of a search I had made in backs numbers of the JOURNAL. Considerable diversity of opinion prevails on several points, especially in regard to the time taken and the proportion of the ingredients, but each and all make efficient candy, capable of pulling a good stock through:—

Maker.	Time taken.	Sug'r.	Cream of Tartar.	Wat'r.	Salt.
	Min.	lbs.	Tea-spoonful.	Pints.	
Mr. McNally	2	7	1	1½	none
Mr. R. Brown	10	10	½	1½	Salt
Mr. Woodley	6	6	½	1	Salt
Mr. Raitt	10	10	½	2	Salt
Mr. Cowan	Till ready	6	½	1	none

D. M. M., *Banff.*

CRUELTY ON THE SHOW-BENCH.

AN APPEAL TO BEE-KEEPERS.

[4940.] I feel called upon by my own conscience to draw the attention of exhibitors at shows, and others interested, to the unpardonable cases of cruelty to bees that one occasionally sees enacted on the show-bench. I wish to lay no wilful charge of cruelty to any one. I believe every modern bee-keeper loves his bees. But it is difficult to help speaking when such a case as the following comes to one's notice. I was judging at a Midland Counties show in England some little time back when it was my duty to adjudicate upon several classes of observatory hives. In every case there were observatory hives staged so overcrowded with bees that it required no experienced eye to at once see that the poor little creatures were suffering severely, and that from such a simple thing as want of air.

One hive (one of those single-frame observatories apparently contrived for torture) had only a small, miserable vent-hole at the top and insufficient ventilation at the bottom, yet it was so overstocked with bees that by five o'clock nearly all the insects were either dead or dying!

It was a case of such needless cruelty, a scene which would affect any lover of Nature and Nature's creatures as being both cruel and unnecessary. I therefore appeal to British bee-keepers, and ask, Why cannot this sort of thing be put a stop to? I feel sure that ignorance is the cause, and I lay no other charge at the door of the offenders, but I for one cannot witness such wholesale slaughter and not raise my voice in trying to prevent a recurrence of such cruelty as may be witnessed every year at various shows.

Is there no remedy? Must the little labourers who toil for us with such untiring energy and devotion be tortured to death in this way? I appeal first to the more experienced among British bee-keepers, and ask them to be more careful in the future, while to the less experienced I say consult some one not only experienced but kind to bees before attempting to exhibit observatory hives stocked with bees, unless he has obtained

sufficient information to enable him to do so without cruelty to our helpless little friends and benefactors.—R. HAMLYN-HARRIS, D.Sc., F.R.M.S., F.Z.S., F.E.S., &c., Imperial Department of Agriculture for the West Indies, *Barbados, October*.

NOTES FROM THE LAKE DISTRICT.

[4941.] Honey has been at a premium here this season. A cold summer, during which little nectar was secreted, was followed by a very unfavourable heather season.

Many stocks are short of stores for winter, and will not be able to hold out unless well supplied with candy. Swarms were not very numerous, and many showed an inclination to seek fresh pastures, taking their departure soon after clustering.

Foul Brood.—The treatment of this in a mild form, by pouring into the affected cells crude carbolic acid, as I have seen practised by more than one expert, should be discountenanced, as it must cause the death of scores of bees. These cells will invariably be found cleared out in the following spring, and every bee which has assisted in the work will, no doubt, have been destroyed. The diagnosis of it (F.B.) is to my mind not altogether satisfactory, the fact of a few or many cells containing a brown, ill-smelling mass, is not sufficient evidence without a microscopic examination. I have known of a case where a hive was full of such cells, in which all the bees died; this was replenished—without any remedial measures having been taken—by driven bees, and which in the following spring did not show a trace of foul brood, but was the strongest hive in the apiary and gave a good return.

I am of opinion that chilled brood may undergo a similar decomposition, especially if cold weather should supervene to prevent the bees clearing out the dead larvæ.

Heather Honey.—Mr. Simmins, in his book, advises re-queening, before the heather flow commences, with a young queen of present season. I should be glad to know if many practise this, and with what result. My own experience is that young queens are not so prolific as second-year queens; and, in spite of the re-queening, the honey does not go upstairs so freely as in a hive with a second-summer queen.—HEATHER HONEY.

BEE-KEEPERS AND FOUL BROOD.

[4942.] Having read the query (2988) of your correspondent "Iago," in B.J. of October 23, I was greatly surprised to hear of foul brood being prevalent at Treharris. He evidently surmises that his bees have contracted the disease from those of his neighbours. I was told that one of his neighbours did lose a few stocks owing to moving to another house last winter, and another neighbour lost a stock or two, but I cannot say from what cause. As regards myself, I am also a neighbour, who only commenced bee-keeping in March last, and now possess three hives, which are open for inspection by any expert "Iago" may wish to send; therefore I hope your correspondent will not blame me for spreading foul brood for want of the care which, according to what appears on page 429, he has failed to exercise himself, or possibly he would have found out before the eleventh hour that his stocks were badly affected, and thus endangering those of his other neighbours. I examined my own hives six weeks ago, and found them quite healthy with brood, and abundance of stores for wintering. I fed up with about 16 lb. of syrup, and am going to add a few pounds of candy. Bee-keepers are not numerous in Treharris, and therefore it should not be difficult to stamp out foul brood, for I do not think the neighbours referred to would be so mean as to stand by idle if they were aware that their bees were affected. To my mind, then, the only way out of the difficulty would be for each one of us to join the Glamorgan Bee-keepers' Association, which I am sure would assist us. Like "Iago," I have been attacked with "bee-fever," but everything has gone on satisfactory up to the present; but I am glad to read, on the open confession made in your pages, as it will enable neighbours of the writer in question to be on their guard. In conclusion, I wish to say that I attended the *conversazione* of the Glamorganshire B.K.A., held in Cardiff on October 23, and derived some knowledge from attending it, and also from the appliances and honey on view, while I felt proud to be present at such an interesting occasion, with plenty of welcome to all bee-keepers. I shall certainly join the Association in the coming year, hoping "Iago" and his neighbours will do likewise.—W. J. HAYES-*Treharris, November* 1.

BEES IN A RABBIT-HOLE.

QUEENS AND EXCLUDER ZINC.

[4943.] On Monday, October 27, while engaged in my usual winter occupation of trapping rabbits, I came across a very unusual sight, a description of which I thought might be of interest to your readers. While busy setting my traps to catch rabbits, I noticed some bees flying in and out from a rabbit-hole near by. The hole in question had a much larger entrance than usual, from the very numerous rabbits using it; so I could see the bees and combs without enlarging the mouth of the hole at all. Resolving to secure the bees if possible, I inquired if there were any bee-keepers near, as I was twenty-five miles away from my own house. Hearing of a place where bees were kept, I went there, and got some frames and "tying-in tape," then returned and began the job. I found the first combs

had broken away from the earth to which they had been attached, and had fallen down in a heap, but the bees had then built upward from them, and so had got a good deal of comb for clustering on. There was a fairly good lot of bees, but very little honey; however, I secured all there was of bees and combs, and having nineteen stocks at home, I had plenty of sealed stores to give them for wintering on.

I am much interested in this lot of "rabbit-hole bees," because, while a rabbit-trapper in winter, I am a bee-keeper in summer, and find my bees not only pay very well, but keep me busy making hives, putting on and taking off supers, and selling the honey when gathered in. I also attend to nearly all the bees about here, as the expert never pays us a visit. I am, however, thankful that there is a B.B.J. within reach of all, for I find it very interesting. I have also the "A B C of Bee-Culture," which is a good and helpful book.

On looking over the B.B.J. of October 30, I notice a query on page 439 about queens passing through excluder zinc. A bee-friend called my attention this summer to a similar case. We found queen-cells in the super—some being sealed over—and there was also sealed drone-brood in the combs, but, after removing the supers to try and find out if the queen could have passed through owing to careless fixing, we found she could not have done so. Then we removed the cap from a queen-cell and found a young drone therein. Later on we discovered that the eggs in super had come from a "laying worker" which we promptly killed. The hive in question had no less than forty standard frames in and tiered above the brood-nest; the queen being confined to the latter by excluder zinc, while the fertile worker was laying in the top story. This is not the first time I have known the same thing to happen, but never before did I see drones hatched in queen-cells.

In conclusion, I may say bees are still carrying in pollen, while no feeding is required. I will shortly send you a photograph of my apiary and a few notes on my fifteen years' bee-keeping experience for "Homes of the Honey Bee." — T. STAPLETON, *Cornwall, November* 2.

BEE-NOTES FROM LEICESTERSHIRE.

[4944.] I am sending a few lines giving the results on the bee-season of 1902 in this part of the country. I am located in the south-west part of Leicestershire, within a few miles of North Warwickshire, in a district not very favourable to the production of honey in large quantities, being almost entirely dependent for surplus on the white clover. A few fields of beans are grown, but no sainfoin, and lime trees do not thrive in this neighbourhood. However, since I commenced here in '94 I have always managed to secure some surplus. My average in a good year has been about 60 lb. per hive. I have made it a rule to re-queen all my stocks every second year by introducing a young queen to half of the colonies every year, and in doing so have purchased queens from breeders who claim to have a superior strain of bees. Owing to the increase of stocks in my apiary two or three years ago, the expense of purchasing young queens became considerable, so that I decided to raise my own in future, though I still continue to buy queens from strains which have given remarkable results, whether it be in this country or in America; and in this way I now have some fine queens from G. M. Doolittle, J. P. Moore, and the A. I. Root Company's Red Clover strain, the "Hutchinson" Superior stock, and last, but not least, Simmins' "W.S." Italians, and also from other less famous breeders. I do not hesitate to say, as the result of my experience with these various strains, that some are much superior to others; at any rate, they give better results with me in this district. If you think it would be of interest to the readers of the B.J., I will another time give some of my experiences with the different races of bees. At present I will confine my report for the past season, commencing in the spring with twenty stocks in hives of various makes, but all taking the standard frames.

I set apart five stocks for queen-rearing purposes, the others being run for honey. I had one small swarm, which came from a very strong stock in a hive with twelve frames in brood-nest, a box of shallow-frames above and a non-swarming chamber below containing frames with starters only. The swarm fortunately entered an adjoining empty hive of their own accord, as my apiary is about half a mile from home. The weather here during spring and early summer was wet and cold, and at the end of June the bees were very short of stores, some of the strongest stocks casting out immature drones in large numbers. I therefore gave them a few pounds of syrup. I used about half a hundredweight of sugar previous to the honey-flow—not a large quantity considering the season and number of colonies. At the end of the first week in July we were favoured with a few days of real hot weather, and the clover was then coming well into bloom, and I never remember honey to come in so rapidly. Some of the stocks quickly filled two boxes of shallow-frames, and though I kept the extractor going till dark each evening, I could scarcely give room fast enough. I had to put on both standard and shallow bodies fitted with starters only to keep pace with their requirements. Unfortunately, however, just as the honey-flow was at its best the weather changed, the wind veered round to east and north, and became cold and stormy, so honey gathering ceased almost as suddenly as it commenced. However, on finishing up extracting, I found some of the hives yielded 100 lb., others 50 lb. and 60 lb. respectively, so that I have no cause to complain about my share of honey for 1902.

The quality is very good, but granulation began very quickly. If it was not drawn off from the ripener within a few days after being extracted bottling was impossible until it was reliquefied.—J. G., *Hinckley, November* 8.

A NOVEL BEE-HIVE.

[4945.] The novel hive shown in the illustration is the handiwork of Mr. B. Hayton, Kendal Park, Kendal. It consists of part of an ash tree trunk in two sections. The lower part or stand is, of course, solid, thus providing a substantial base. The bees' compartment was hollowed out without cutting what is now the outer wall, so that no joint was necessary. The roof is hinged and opens or closes with the greatest facility. The

A NOVEL BEE-HIVE.
(Made from an Ash Tree.)

making of the hive was a work of time and patience, not little of either being required for the task. Mr. Hayton reckons that it took him two months at three hours a night, and nothing less than a five pound note would repay him for his trouble. A second hive of a similar type is now in course of construction, and when completed the pair will match.—D. F., *Kendal.*

LOCATING FOUL BROOD.

[4946.] I have often thought, when reading the BEE JOURNAL and coming across remarks about "foul brood unknown" in given districts, it might be only a very nice way of playing the confidence trick on likely buyers of driven bees and swarms, &c. If readers will refer to the JOURNAL, July 24 (Query No. 2930), headed "Ants in Hives," and my reply to same in issue of August 7 (page 320), it will in some measure explain the above remarks. If not out of place, let me say I am a great lover of bee-life, and not only travel in order to assist struggling bee-keepers, but freely give what little advice I can, besides rendering assistance where requested to do so; not otherwise. This spring I was asked by a bee-keeper to meet him for the purpose of inspecting and putting into seasonable form some bees owned by the head gamekeeper to a nobleman in Yorkshire. The owner of the bees was seriously ill at the time, and has since, I regret to say, died. The bees were kept within a quarter of a mile of the place where dwells the writer of "Ants in Hives," where "foul brood is unknown." I found them in a very bad state, and expressed my opinion at the time as such to my friend. Some few weeks before this took place I had been asked by a bee-keeper living within half a mile of the same place if I would unite four stocks and thus make two colonies of the four, as he did not wish to be overstocked. The first two lots I united all right, but on coming to the others I found one of them with frames and combs broken down in a heap, and nearly impossible to remove. I therefore got the bee-keeper to let me operate on the stock in my own apiary—some four miles away—which he did. I made a start on the first fine day, only to find the bees in a very bad way with foul brood. This stock was the oldest of the four lots referred to above. I can only, after

such an experience, come to one conclusion, that the place mentioned on page 297 is in a very warm corner for foul brood! On August 30 a neighbouring bee-keeper called at my house, and in our subsequent conversation about bees and other matters I found it was he who had written on this matter under the *nom de plume* of "B. Hive," on page 297.

In reference to Mr. Woodley's "Notes by the Way," on page 425, I quite agree with Mr. Godsland's remarks on the question of the "tempting offer" of an appliance maker, viz., 6s. per dozen for good sections, considering the very poor season. With respect to Mr. Woodley's remarks about the use of spring crates being offered for sending sections in, it almost looks as if the honey-buying appliance dealer would have a lot of these spring crates to offer cheap next season. I am also surprised to see how neatly Mr. Woodley tries to make out how unprofitable dealing in sections, even at these low prices, turns out. For myself, I must say Mr. Woodley pulls a rather long string in his "Notes" on this subject. I happen to know one large section buyer in the North of England, whose advertisement appears in the BEE JOURNAL every year, and who does not over-burden the bee-keeper with a too heavy share of the cash when buying sections. I often visit the town where his shop is, and give a look at the window to see how sections are selling, but seldom find them offered at less than 1s. 3d. each, unless they are granulated, in which case the sections are sold at 10d. each, some combs being cut away from the wood and placed on a dish and sold as a "job line." This proves one thing, viz., "The labourer is worthy of his hire," as Mr. Woodley says.—J. H. HORN, *Bedale, Yorks.*

SOME EAST KENT NOTES.

[4947.] *Selling Honey.*—Having read the remarks of your correspondent, "W. W. K., St. Brelades," page 439 (4931), on my note under this heading in B.B.J. of October 16 (page 418), I may say that the 70 lb. of honey was disposed of within the time your correspondent surmises, viz., a month. I am glad to have his favourable opinion of my method of selling honey, while I admire his faith when calculating that 700 lb. should be sold in a year. If "W. W. K." has that weight of honey by him, I hope he will sell only to consumers direct, and then let readers of the B.B.J. know how he has fared. Until 700 lb. has been sold retail by the producer at 10d. or 1s. per lb. from his private residence in twelve months, I fear I must remain, like "D. M. M." and the bogey man, a "doubting Thomas," for of its possibility I, like the Scotsman, "hae ma doots." At the same time I am confident that a lot of honey could be sold in this way, and since taking down my honey show-case I have had quite a number of people call and inquire if I had any more honey to sell. "W. W. K." hits out pretty straight in stating that bee-keepers are in too big a hurry to sell; indeed, I am myself a sinner in this respect, for had I been less pushful in selling wholesale, the extra 2d. on the three dozen or four dozen pounds that went to the middleman would have been in my own pocket. I am, however, very favourably situated for retailing honey from the door, my house (a detached villa) standing a little back from the main road from Canterbury to Margate. It is thus located in one of those spots where the "British public," as Mr. Woodley says, pass my door. But surely such places are not few and far between, and there must be scores of bee-keepers possessing less than a dozen hives who are similarly placed to myself, and could sell their honey at a much better price in this way if disposed to try. Next summer I intend to have another "go" at this "front door trade," and hope to have both sections and extracted honey to offer. Any way, I mean to hold my crop and not be in such a hurry to sell wholesale as hitherto.

Smoker Fuel.—I was much interested in the discussion at the B.B.K.A. conversazione on smoker-fuel. Brown paper is the material generally used, because it is at hand nearly everywhere; but the objection to it is the moisture emitted from the nozzle of the smoker after being used for some time. "Touchwood" makes a good smoke and lasts much longer than paper. I first got to know of this fuel from a visit paid to Mr. Sladen's apiary some three or four years ago, and I now use it when making a lengthy examination.—ARTHUR H. HOMERSHAM, *Sturry, near Canterbury, November* 8.

DEALING WITH FOUL BROOD.

AN UNFORTUNATE PURCHASE.

[4948.] On going into a new house in March last, I took over three stocks of bees in boxes, built "W.B.C." hives for them, and allowed the bees to transfer themselves to the latter. I afterwards discovered that one of the three boxes was rotten with foul brood and another slightly affected. The boxes were then removed and burnt. Later on I bought two stocks in frame-hives, thus leaving me at the end of the present season with five stocks in good hives. When examined in the autumn all were apparently healthy except one, which had about a dozen cells diseased. These cells I cut out, and, after extracting all honey, fed up with syrup medicated with naphthol beta. 1. Is this hive likely to be clean in spring and remain so? 2. What are the staining and culture properties of *Bacillus alvei?* I can find no mention of it in my text-books.

I propose in the spring to try my hand at queen-rearing. 3. Is there any objection to dividing up a "W.B.C." hive into three by division-boards and separators to entrance, putting temporary wings on alighting-board,

for reception of nuclei? 4. What is the *safest* way of introducing queens? I bought two Italians in September, caging them as directed on comb; one died within thirty-six hours in cage, and the other had been eaten out when I opened hive to release her after thirty-six hours, and I found bees just killing her off on alighting-board. Luckily I had preserved the old queens, and got them back and safely accepted.

Apologising for my lengthy list of questions, M. B., *Selsey-on-Sea, Sussex.*

[1. If the disease was in the incipient stage only, the chances are favourable that it will be found free from foul brood in spring. In any case, however, the hatching brood will need to be carefully watched in spring, especially during the month of May. 2. You will do well to read Mr. H. W. Brice's remarks, printed in a former issue of this journal, on "stains" for use in studying the *Bacillus alvei* under the microscope. 3. The hive may be temporarily divided so as to form three nucleus colonies, if the temporary entrances can be formed, say, one in front and one at each side; but to have all three doorways close together in front would probably lead to mishaps in queen-mating. 4. Either the "Edwards" or the "Brice" introducing cages and methods of using are as safe as any we know of.—EDS.]

GLEANINGS FROM FOREIGN BEE JOURNALS.

BY R. HAMLYN-HARRIS, D.SC., F.R.M.S., F.Z.S., F.E.S., ETC.

Leipziger Bienenzeitung (Germany). — In the Saxon Erzgebirge and in the Province of Silesia there are often sad complaints from bee-keepers in early spring, especially in May, when the early flowers yield the first pollen and honey. It is then found that the bees, together with their brood, die off in great numbers, so that in some places not a single colony remains alive, and many a small farmer has lost all his bees, while his fruit trees stood fruitless. The source from whence the mischief comes—in this part of the country it brings certain death to the bees—is the arsenic manufactory at Maifritzdorf. It appears that arsenic is found in the mines of Reichenstein, the ore from which mines is ground and roasted, and arsenic prepared therefrom at the above-named manufactory.

The fumes generated in the process pass through chambers, where they are gradually cooled, and the pure arsenic deposited, while the refuse passes into the outer air by means of a high chimney, and falls in the form of fine dust containing arsenic on the surrounding vegetation and in the water. The poison is then taken from the plants by bees in the form of honey and pollen, it being known that insects are very susceptible to the baneful influence of the poison.

Honey, pollen, and a few dead bees from one of these unfortunate apiaries were examined at the chemical laboratory of the Silesian Chamber of Agriculture in Breslau, and the analysis yielded unquestionable traces of arsenic.

This had gone on for three or four years in the neighbourhood of Maifritzdorf, and the height of the chimney in question was increased to try and lessen the evil, but this only carried the fumes over a wider area without reducing the mischief. The district is very mountainous; therefore, much depends on the winds prevailing; thus the bees in some villages suffered severely, while in other villages there was nothing to complain of. Neither man nor the larger animals are in any way injured by the slight arsenical deposit in water or on vegetation, and the failure in the fruit crop results from the absence of insect life.

The Same (Germany).—The bee-louse *Braula cœca*) may become a more serious plague than is generally supposed. That the parasite weakens the colony seemed more than probable, but it was thought to be impossible that its presence could bring about the destruction of a stock of bees. One bee-keeper, however, last year had the number of his stocks reduced from thirty-seven to a single hive in consequence of a plague of the bee-louse. In the early spring the hives showed nothing peculiar, but little by little the flight of the bees and their general movements became heavier, while their numbers diminished visibly; many took flight and never returned. Near the hives on grass stems and on bits of wood were found little groups of dead and dying bees. Not only the queen-bee, but also the workers were largely covered with the louse, and the parasites were visible even on the brood-combs. The hive was like one in the last stage of famine, and the brood became less and less, while the bees lost heart and were not in the least inclined to sting!

In some of the hives the queen was found dead, covered thickly with lice, on the floor of the hive. Four affected colonies fled from their demoralised homes, and the others slowly died out.

The reason of this seems to be taking too much honey from the stocks, and feeding with only sugar syrup, which is not enough, and will not answer for brood rearing. This done for several successive years brought the bees into such a weakened condition that they were unable to withstand the attacks of these destructive parasites. Scrupulous cleanliness is most needful to be observed, and no débris allowed to accumulate on the floorboard, as that is the first hiding-place for the bee-louse, and also of the wax-moth, another enemy of the hive and its inhabitants.

PRESERVING THE FLAVOUR OF HONEY.

We are all anxious that our honey be of the very best quality and flavour, but, perhaps, we are not all of us aware that we ourselves have much to do in bringing about the desired result, as well as the bees. The bees may give the honey into our hands in the very best condition, yet it is possible for us, by our ignorance or carelessness, to injure it much, if not utterly ruin it. It is a fact that not many people, aside from bee-keepers, know how to keep honey properly.

One of our neighbours bought a case of honey from us. She used one section for tea, and put the rest in the cellar for safe keeping, to be only used upon state occasions. Some time afterward company came unexpectedly, and as she knew they were very fond of honey she went to the cellar for a section, thinking as she went how fortunate she was in having such nice honey to offer them. You can imagine how she felt on finding her honey utterly ruined, not much like the beautiful white honey she had put there. The cellar was damp—the very worst place she could have possibly put it; and yet it is a very common thing for people who do not know any better to put honey in the cellar. They naturally think it a nice, cool place for it, not knowing that the hottest and driest place you can find is the best in which to keep honey.

A place in the kitchen near the cook stove is an ideal spot in which to keep it. If kept there long enough the honey will string from the knife when it is cut, and the flavour will be uninjured. Neither will you be likely to have any trouble with the honey candying in the comb, as it may do if kept in a cold though dry place.

Just the other day a lady telephoned me to know what she should do with her honey that had candied in the comb. I told her the only thing she could do was to melt it up and use it as extracted honey; gave instructions as to how she could do it, saying, "Put the honey in a dish or jar, set it in hot water, but be careful not to let it get too hot, as that would spoil the flavour. When it is all melted set it aside to cool. When cool remove the cake of wax which has risen to the top, and the honey is ready for use. After washing the honey off put the wax in a dish with some hot water, and melt it over again, and when it is cool you will have a nice cake of wax."

If the public knew more about taking care of honey it might be that they would use more of it. As it is, if they spoil the honey by not taking the right care of it, they are not likely to blame themselves for it, but think they have been cheated by having an inferior article palmed off on them, and they make up their minds that they will not again invest much in honey right away. And they may be honest in it, too, as they do not know any better.

The kitchen will do very well for a small lot, but if a large quantity has to be stored, some place else must be provided for it. An attic or a garret is a suitable place—one of those attics on which the sun beats down so fiercely in the summer-time that it makes it so hot that you feel as if you could scarcely breathe, that is the place for your honey. There it will thoroughly ripen.

It may not be generally known, but honey that has been kept for a sufficient length of time in such a hot place will be able to stand the freezing of the severest winter without the comb cracking, as it usually does when frozen.

After the thorough ripening the honey gets by being kept as above, it never granulates, and perhaps it is the granulating that cracks the comb. Some have special rooms made as honey-rooms, with dark walls and roofs to attract the rays of the sun.

In piling up your supers of honey in such rooms, or in the attic, it is a good thing to put small blocks between them at the corners, making a space of about an inch between the supers for a free circulation of air to pass through.—EMMA M. WILSON, in *American Bee Journal*.

Queries and Replies.

[2997.] *Suspected Foul Brood.* — I am sending a piece of comb which I suspect is affected with foul brood, and shall be obliged for reply in B.B.J., to which paper I am a yearly subscriber. I have three stocks of bees in frame-hives, and two of them seem perfectly healthy, all brood having hatched out when examined on October 23 (that being the finest day since I got the hives back from the moors). The stock in question had two frames like sample sent. I have removed all frames, and have given six from my other two stocks to winter on, which the bees cover well (in fact, they are crowded). I have put naphthaline in each hive, and shall give in a day or two a 2-lb. cake of medicated candy to each stock. I therefore ask: 1. Have I treated the supposed diseased stock rightly, or would you advise destroying the lot now? 2. If disease is not of long standing can I save stock in early spring by treating according to "Guide Book"? I also enclose two dead bees for inspection and your opinion of the same. I suspected this stock as being queenless by the presence of drones, and on examination found the crushed bee between shoulder of frame and body box which I thought was the queen. I then purchased a cast and united them on October 27, and to-day, the 31st, found the full-sized bee which I think is a queen cast out and several drones. The queen introduced

is much larger than the one sent.—D. RAISBECK, *Yorks, October* 31.

REPLY.—1. We find traces of foul brood of old standing in comb sent, consequently you did quite right in getting the bees on to new and healthy combs as stated. After the remedial measures adopted, it will be advisable to keep a sharp look-out in spring—when brood will be hatching—for any trace of disease visible, but we would give the stock a chance to recover itself. 2. You need only bear in mind that it is not a recent outbreak of the disease, and be careful in spring as advised.

[2998.] *Honey and Eczema.*—I suffer from a form of eczema which until now has never appeared on my limbs in scales larger than a split pea. It has recently, however, developed considerably, and that since I took to eating honey in rather large quantities. Is it likely that honey is the cause? Perhaps some medical reader might comment — "WESTERNER," *Jersey, November* 10.

REPLY.—We shall be glad to have a competent opinion on the above. For ourselves, however—and armed with the exceptional opportunities for hearing of such things—we have no hesitation in declaring our conviction that "eczema" in no form whatever will result from eating honey.

[2999.] *Deferred Breeding after Queen Introduction.*—Will you kindly give me your opinion on the following? On September 24 I introduced an imported Italian queen to a black stock after taking away the old queen. On examination a week later I found she had laid a small patch of eggs; so, concluding all was well, I packed them down for winter. Seeing however, last week, that in my other two hives (both young queens) the bees were carrying in pollen freely, while the bees of the hive in question—which, with the imported queen, is the strongest stock I have—were not, I examined them to see if the queen was all right. I found no eggs or brood in any form, but the queen was there and seemed lively enough; so I came to the conclusion that the patch of eggs I saw were all she had laid, seeing that, four weeks later, there was no brood, neither have I seen any Italian workers yet. 1. Am I right? 2. This queen was purchased direct from Malan Bros. Are they known as reliable dealers, and do you think I can depend on this queen for next year?—W. H. S., *Nottingham, November* 10.

REPLY.—1. Probably you are quite right, but it does not follow that the Italian queen is any the worse for the fact. You had better defer judging till next spring, when the Italian may possibly resume the maternal work of egg-laying freely, and perchance shoot ahead of the young ones. 2. We consider the firm referred to quite reliable.

[3000.] *Wintering Bees: Amount of Stores Needed.*—As this is my first season at bee-keeping, I shall be very much obliged to you if you will give me your advice on the following point through the B.B.J. I fed my stock (as directed in the "Guide Book") up to September 28, and, having then to go from home, I had to discontinue feeding, and therefore packed up the hive for winter on that date. The bees were then on nine frames, each being about half filled with sealed stores. 1. Do you think this sufficient food, or would you advise me to open up the hive again and give some soft candy? 2. I read in the "Guide Book" that eight frames are sufficient for wintering on, but as I was stung three times in brushing off the bees from the tenth frame I relinquished any further operations. Did I do right?—C. G. S., *South Norwood, Nov.* 10.

REPLY.—1. "Nine frames half filled with sealed stores" will be more than ample food for winter, so there will be no need for candy. 2. Quite right. It is best to remove any superfluous frames not covered by bees when "winter packing," but no harm will result from what you did.

LECTURES ON BEES.

TECHNICAL EDUCATION AT THE PEOPLE'S PALACE.

Referring to the lectures by Miss Hall, Curator of the Stepney Borough Museum, that lady writes as follows:—

"I thought the query contained in the enclosed letter might be interesting for your journal so send it on.

"I am just in the midst of my bee campaign with the elementary schools. This year we have Messrs. James Lee & Son's excellent hive in the Winter Garden at the People's Palace, and I am getting a great many classes from the schools."

DEAR MADAM,—I am taking the liberty of asking for some informating which I think you may, perhaps, be kind enough to supply if I am not trespassing too seriously upon your time, which is, doubtless, valuable.

My uncle, the Rector of a parish near Reading, has kept bees for several years, and is deeply interested in them. It would, therefore, be a great pleasure to me if I could obtain the information he is in search of. He says:—"I do not suppose anything is likely to take you to the People's Palace any day between this and October 3, and act as eyes and ears for me to discover whether Miss Hall, in her lectures on the 'Honey Bee and its Allies,' exhibits any specimens of bees that make their nests in the sand, with specimens of their nests? In the neighbourhood of Colwich (between it and Stafford), close to Milford Station, on Cannon Chase, I came upon some hundreds of bees, apparently sand-dwellers—to judge by the number of little holes in the sand—but possibly attracted by the heather. The weather forbade my carrying out a wish to go thither again with trowel, &c., to try to

get specimens of their cells, for which I might have had to dig between 1 ft. and 3 ft. The first time I saw them I was not free to make an examination. I have in vain tried in Wolverhampton, Stafford, and Reading libraries to get any material information. Seeing in the *Standard* a notice of Miss Hall's lectures I have wondered if I could get from her the information I wish."

Being, unfortunately, prevented from attending your lectures I have copied out the extract in full, because my own ignorance on the subject is so great that I am not even sure what it is he wishes to know, but imagine he wants to discover whether the bees he saw were really sand-dwellers, and what sort of nests sand-dwelling bees would make.—E. G. H., *West Kensington.*

[Replying to the question on wild bees, we have no doubt of their belonging to a variety of the *Andrena* species, commonly known as "sand bees." The reverend gentleman interested would no doubt obtain fuller information from the papers on "Our Wild Bees," by Mr. F. W. L. Sladen, which appeared in our pages some time ago.—EDS.]

Notices to Correspondents & Inquirers

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

*** Referring to bee-keeping near Liverpool, Mr. Geo Rose, Great Charlotte-street, Liverpool, writes :—"If your correspondent Mr. Geldard will make an appointment and give me a call I shall be only too glad to talk over with him the districts favourable to bee-keeping round about Liverpool. I hope you will also kindly acquit us Liverpool bee-men of want of courtesy in not coming forward to oblige Mr. G., because I have myself previously made this offer to him ; it is thus difficult to see how much more we can do."

D. L. (Dean).—*Late Pollen-carrying.*—1. The busy pollen-carrying noticed at this late season indicates that some brood-rearing is going on in the hive, owing no doubt to having introduced a prolific Italian queen five weeks ago. 2. Italian bees—if pure—are less inclined to sting than the ordinary brown or native variety.

M. D. (Leamington).—*Bee-keeping as a Business.*—Unless as an adjunct to some other business, or as a branch of the bee-appliance trade, it is not advisable to rely on bee-keeping. The results in honey production are too uncertain in this country. On the other hand we consider it a valuable addition to the business of a small farmer.

FAIRPLAY (Alnwick).—*The Newcastle Exhibition.*—We have had several adverse comments from bee-keepers on the management of the last show held in the same town, and we cordially sympathise with exhibitors if they have been unfairly treated ; but when correspondents write anonymously, or withhold their names from publication, we cannot do more than say that it is free to all who consider themselves unjustly dealt with at the former show to give the forthcoming one the "wide berth" that "Fairplay" suggests. The other exhibitors whose names are given will, no doubt, use their own discretion without any advice from us. The question of "bad" or "good" management is a very complex one, and without full details on both sides of the case it would be manifestly unfair for us to take the steps our anonymous correspondent thinks desirable.

W. BADCOCK (Ossett).—*Bee Associations and Insurance for Bee-keepers.*—It is not absolutely necessary to join an association in order to take advantage of the insurance scheme. Non-members have, however, to pay an extra 6d. in addition to the usual premium ; and it is thus advantageous to join your county B.K.A. Failing this, apply to Mr. E. H. Young, Sec. B.B.K.A., 12, Hanover-square, London.

Suspected Combs.

Special Notice to correspondents sending queries on "Foul brood."

We urgently request that all letters sent with samples of suspected comb be put outside *the box or tin containing the sample. Also that no more than a couple of square inches of comb be sent, taking care to neither crush the comb nor probe the cells before despatching.*

In urgent cases (and where possible) we undertake to "wire" replies as to F.B. if six stamps are sent to cover cost of telegram. All letters to be addressed "Editor," not "Manager."

M. S. (St. Ives).—The cells contain nothing worse than pollen, but as the comb is black and old it badly needs renewing.

C. E. P. (Glam.).—Although the cappings of sealed cells in sample of old comb (where all trace of brood has dried up and disappeared) have a very suspicious look, we find no trace of disease therein. The dead brood in newer sample of comb is "chilled" only.

Honey Samples.

O. M. (Jersey).—The light-coloured sample is from mixed sources, mostly clover, but it is rapidly granulating, and would need to be slightly warmed in hot water to remove the granules and cloudiness before being fit for show-bench. Quality is good. The other sample (medium colour) has some heather honey in it, but the quality is deteriorated by it showing signs of fermentation.

Some Queries (not urgent) are held over till next week.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION

ITS RELATION TO COUNTY ASSOCIATIONS.

Reverting once more to the recent interesting and useful Conference of Representatives of County Associations with the Council of the B.B.K.A. we wish to draw careful consideration to one point of great importance mentioned by at least one delegate. This is, the advantages derived by County Associations from their connection with the central body. From time to time the question has been asked "Whether a County Association receives good value for its affiliation-fee of one guinea?" Various replies have been made to the inquiry. Very proper stress has been laid upon the assistance rendered to County shows by (1) the appointment of fully-qualified judges through the Council; (2) the granting of medals and certificates to the most distinguished exhibitors; (3) the skilled examination of all sorts of new appliances, and reports thereon; (4) advice on matters of detail and difficulty in particular cases. While one or more of these four points will have weight with different Associations, we desire now to direct special attention to four other reasons for a cordial and close connection between the B.B.K.A. and its affiliated institutions. If, in doing so, we have to appeal from parochial and provincial to wider views we believe we shall have from our readers a fair and sympathetic consideration of our theses.

These, briefly put, are the following:—*First*, experience has shown that, if sound and general progress is to be made in any direction, *it is necessary that those interested in a specific subject should secure a central Council of persons, qualified by knowledge and practical acquaintance with affairs, to act as an executive body.* There will be very varied matters requiring to be dealt with, but wise and resolute courses of action can only be decided upon and carried out by a combination of individuals in whom some measure of authority is inherent. Such a body will, in most instances, be at first self-constituted; but, after a time, if its work has received more or less public approval, and if it is representative of widely-spread opinions, it will gather to itself, of right, greater and more definite power.

Secondly, so soon as the influence and work of such a central Council have gained the confidence of the largely scattered individuals interested in the particular subject or pursuit, further progress will largely depend on the rallying round it of local Associations whose members desire the spread of information and of the best modes of procedure. As our French neighbours say, "solidarity" becomes of great importance. The old fable of the bundle of sticks points its everlastingly true moral, and its applicability to the matter in hand needs no enforcement.

The two propositions we have thus far laid down are of general force. Those which we are now going to state are more closely restricted to the subject of our present article, but are too often overlooked.

Thirdly, then, it becomes every year more essential, for the security of apiculture, as a science and an art, that *there should be a central authority capable of conducting examinations, and supplying the country with certificated experts, to give sound teaching, advice, and help of various kinds to bee-keepers.* The work already accomplished in these directions by the B.B.K.A. has been too little recognised hitherto; but the practical benefits arising from it are immense. We may safely say that it has revolutionised bee-keeping in this country, and any Association which fails to keep this point before itself, either knows little of what has been, and is being, done by the Council, or shows little gratitude for being called into existence. In the future this branch of the central body's labours will have yet larger and more striking results, in view of the countenance and assistance given by County Councils to our County Associations.

Fourthly, in the general interests of bee-keeping it is essential that adequate support should be given to the head Association, which, from its position and constitution, is the only body possessed of means to get, in the interests of apiculture, into touch with the Board of Agriculture, the Councils of great Agricultural and Horticultural Societies, and such trade Associations as connect themselves with the production, sale, and uses of honey.

This last point, as regards the Board of Agriculture, is of prime importance in view of future steps in relation to foul brood. Before any compulsory measures can be taken, the above Department must be interested, influenced, and set in motion, and the only body qualified for securing these ends is the B.B.K.A., strongly backed by its affiliated Associations.

No small amount of most valuable work has been done all over the country in the above directions by the B.B.K.A. The negotiations for space for exhibits at shows; the drawing up of schedules; the appointment of well-qualified judges; the granting of prizes, medals, and certificates; the attendance of members of the Council at the great shows to give information and all kinds of help to exhibitors and visitors—all these are works of no very conspicuous kind, but of far-reaching importance to the advance and prosperity of bee-keeping. We have not exhausted the subject, but we trust that, without holding a brief for the B.B.K.A., what we have urged will satisfy County Associations that their interests are bound up in the stability and hearty support of the central Association.

Obituary.

THE LATE DR. ANGELO DUBINI.

It is with sincere regret that we have to record the death of another eminent veteran bee-keeper. Dr. Angelo Dubini, of Milan, Italy, who has passed away at the ripe age of eighty-eight years, was for forty years in practice as a physician, and was for most of that time attached to the Grand Hospital of Milan. During his medical career he attained considerable distinction, and published several important works which established his medical reputation. He retired from a busy medical practice in 1878, but even in his retirement he could not lead an idle life, and from that time he devoted himself to bee-keeping and the advancement of modern methods of bee-management. He was a most indefatigable worker, and advocate of the movable-frame hive, which he used at his villa apiary at Cassano Magnago, about an hour's ride from Milan. He possessed a most fertile brain, and while a clever theorist, was also thoroughly practical, and showed wonderful ingenuity in the number of improvements in bee-appliances that he invented. The hive he used was a compromise between our frame-hive and the Italian, the frames being taken out with tongs from behind when supers were on, and at other times lifted out from the top, as in the hives used in this country.

In 1868 *L'Apicoltore* was established, Dr. Dubini being one of its founders. He has been a regular contributor to its pages from that time; his articles were ably written, and, being conversant with many languages, his monthly reviews of the different foreign bee-papers were of considerable merit, for he possessed a happy knack of giving the gist or substance of a long article in very few lines. He was the author of "L'Ape e il suo governo," a work of 688 pages, and of considerable importance, which he brought out in 1881, giving all the best information up to that time collected from English, French, German, and other works. At that time great strides were being made in bee-keeping knowledge, and he found it necessary, in 1886, to publish an appendix to the above work, entitled, "Appendice all' opera del Cav. Dot. Angelo Dubini, L'Ape e il suo governo," which contained information up to date of publication, and such as was not contained in the former work.

Since our first meeting with Dr. Dubini at Milan in 1885, we have been in frequent correspondence with him, and have met him on several occasions, always finding him most genial and agreeable, and willing to discuss his favourite pursuit. His loss will be felt not only by Italian bee-keepers but by all who have had the pleasure of knowing him, either personally or through his writings.

[The above obituary notice—written by our Senior Editor—derives additional interest from Mr. Cowan's intimate personal acquaintance with the late Dr. Dubini.—W. B. C.]

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4949.] The late mild open weather has enabled the bees to forage for pollen, and, during the last few days, for honey also, for I have noticed them working on the ivy-bloom. Where stores are short a cake of candy may be given at any time over the feed-hole in first quilt, but care must be taken to cover down with warm material to prevent cold draughts in brood-chambers. The early date at which breeding almost ceased this season seems to have alarmed many bee-keepers. I have myself had inquiries for a reason why this should be, and I could only attribute it to the weather, season, crops, or the low temperature, as probable causes. No doubt others, along with myself, were agreeably surprised when packing down for winter to find their colonies in such a populous state. This was especially noticeable when placing the strips of wood on frame-tops to form the winter passages. This operation I generally defer till later in the season, when the bees have clustered themselves for winter; when this condition is reached the quilt is rolled back, and in laying on the strips a glance tells the strength of colony, which is then marked strong or fair as the case may be, and the whole occupies only half a minute or so. The cake of candy is given some time during the winter months as required. The card in each hive has the condition of the colony marked on it when the overhaul is made in September along with requirements as regards food.

Mice in Hives and on Tops of Skeps.—These should be trapped or caught. If "puss" is employed on the job and does it well, it will be a short shrift for the mice in the future, for every time the bee-keeper is among the hives puss will be near, ready to pounce on the first mouse that moves; at least, that is my experience.

Price of Honey.—Referring to Mr. Godsland's remarks on page 446, I can assure him that it was no imaginary case of the "little lumps." I have had experience of the matter

on more than one occasion. First, let me say that I referred to no particular parcel of honey as advertised in B.B.J., but as a general condition of things. When one bee-keeper having secured a market, purchases the whole of another bee-keeper's sections, I say and maintain that there are three grades of quality, and therefore three grades in market value. If the sections were sold direct to the retailer at 6s. per dozen it would be far more advantageous to the purchaser than if sold to another bee-keeper to sell again to the retailer. Mr. Godsland's 16-oz. sections are "graded" sections, for weight at least, and would probably contain two-thirds first-grade quality; this would enhance the value of the parcel. Thus my remark near the close of the paragraph on "Prices of Honey," (page 425), of one bee-keeper taking advantage of a brother in the craft, expresses my opinion of the transaction, and I have received private letters thanking me for putting the matter fairly before B.B.J. readers. There is one other risk which I did not mention in my "Notes" on page 425—*i.e.*, in selling honey there are "bad debts" to guard against. I myself have had more than one heavy loss in having to accept a small "dividend" in lieu of 20s. in the pound. In one case I did not get a fraction for considerably over £20 worth of honey sent carriage paid.

Metal Dividers in Sectional Supers.—As my apiaries are worked almost exclusively for section honey I wish to say in reply to remarks at the Conference in Jermyn-street, that I have discarded every wood-divider from my stock of appliances and use metal dividers only—some slotted, others plain. Yet, year after year I experience no difficulty in getting bees to take to supers as soon as they are placed in the hives. Some bee-keepers seem to be so eager to get the bees at work in sections that they place them on the hives ten days or a fortnight too early. A neighbour remarked to me last spring, "I have got all my sections on; how are you getting on with yours?" I replied I had not even thought of putting on a single rack of sections at the time and should not do so for a fortnight. The result was every stock of my friend's bees swarmed. I do not say that the swarming resulted entirely from early supering, but the probabilities are that it conduced to the swarming.

Crown-boards for Hives.—The crown-board of twenty years ago is suggested as likely to arise, phœnix-like, from its ashes, and again take its place in the hive. The American plan of using flat roofs to their hives for the winter repository may suit their climate and system, but as British bee-keepers all winter their bees out of doors, the use of a board only above frames would, in my opinion, weed out all but the strong colonies in the apiary—another example of the survival of the fittest. Those "top bars" are, I see, again to the fore. Past volumes of the B.B.J. bear witness that top bars of $1\frac{1}{16}$ in. to $1\frac{1}{8}$ in. wide tend to prevent brace-combs, and that bees do not often build or bulge the face of the comb beyond the width of these top bars; also that there are no brace-combs built and but very little propolis used where these wider top bars are in use. I have combs as flat as a board in these frames, which I have had in use many years. Surely there is "nothing new under the sun"!—W. Woodley, *Beedon, Newbury.*

WANTED, A FRAME.

[4950.] I was pleased to notice by the report of the recent B.B.K.A. conversazione (from which I regret I was absent) that the subject of the construction of frames cropped up during the discussion on brace-combs. As one who has for several years been advocating a better frame, perhaps I may be allowed to say a few words on the matter. And it may not be altogether out of place to remark that at the conversazione held in February last I had in my bag a sample frame, such as I shall here refer to, and upon which I was wishful of raising discussion, but as "Pil Garlick" had already had two "innings"—swarm-catcher and queen cage—the frame never had a chance of having the sleep rubbed out of its eyes.

Always being given to the "weighing up" of things, and taking very little for granted, I commenced my bee-keeping with $\frac{1}{2}$-in. top bars, deeming $\frac{3}{8}$-in. too slight. The appliance maker sent them with a saw cut through the centre, which, to my mind, so weakened them that I substituted solid tops of my own make. Frame-making, however, with the aid of hand-saw and plane, proved too tedious a job, and eventually I reverted to the standard $\frac{3}{8}$-in. top bar.

When the B.B.K.A. selected a certain size of frame as its "standard," it also fixed upon the dimensions of the material composing it. As to whether or not a mistake was made when the size of the frame was fixed I do not propose to deal, but it is absolutely certain that a big mistake was made in fixing upon a top bar of $\frac{3}{8}$in. in thickness, side bars $\frac{1}{4}$in. thick, and a bottom bar of $\frac{1}{8}$ in. substance, all being $\frac{7}{8}$in. wide. Manufacturers have all departed from these sizes, so far as regards side and bottom bars; the original top bar only is left as settled by the Committee, and this has been worsened by the introduction of a saw-cut through it in which to fix the foundation. Nastiest of all nasty methods of foundation fixing, the inventor (?) of the saw-cut ought to be hung, drawn, and quartered! Not only has it so weakened an already weak top-bar that the two sides of it rarely stand level, but it has done more, I believe, than anything else to encourage the propagation of the wax-moth.

Long ago I urged upon friend Lee the desirability of a wider and thicker top-bar, and

the matter has been under discussion in the editorial sanctum of the B.B.J. Whilst Mr. Lee admitted the desirability of something wider, he would not countenance extra thickness; Mr. Carr was favourably inclined towards a thicker bar, but would not hear of a wider one. In my own apiary, I have for some years been testing the relative merits of top-bars of all widths and thicknesses, and I have had under purview bars $\frac{7}{8}$ in., 1 in., $1\frac{1}{16}$ in., $1\frac{1}{8}$ in., $1\frac{1}{4}$ in. wide, and of all thicknesses, from $\frac{3}{8}$ in. to $\frac{7}{8}$ in., and whilst I like best of all these $1\frac{1}{8}$ in. by $\frac{7}{8}$ in., I realise that the very thick top-bar restricts the comb space too much in a frame of "standard" size. As a result, I have settled upon a top bar $1\frac{1}{8}$ in. by not less than $\frac{5}{8}$ in., the ends reduced to $\frac{7}{8}$ in. by $\frac{3}{8}$ in., so as not to interfere with the "metal ends" in universal use; side bars, $\frac{7}{8}$ in. by $\frac{5}{16}$ in., and bottom bar $\frac{7}{8}$ in. by $\frac{1}{4}$ in. Personally, I want the bottom bar the same width as the side bars, but the majority of appliance dealers send them out narrower—which is, I think, a mistake.

Now, it may be asked, what advantages accrue from the use of this stouter and more expensive frame? To any one propounding that query I would say, give it a trial for one season, and if you do not then approve of it, I will change all combs in such frames for equally good combs in frames with the "standard" top-bar. This may be thought a sly move to get rid of something I do not want, but I will guarantee that the exchanges would be few and far between. The thicker and wider top-bar will enable one to have all frame tops in the hive in the same plane; it will prevent to a surprising extent the daubing in of propolis; it will almost entirely prevent brace-comb, and materially reduce the need for the use of excluder zinc between brood nest and supers.

And then we come to the question of foundation fixing. The saw-cut is out of court. "I'll have none of it." What, then? At one time I was favourably inclined towards groove and wedge (Abbott's method), but the wedges *will* give way unless groove and thickness of foundation are correctly adjusted. I have given that up. What, then? The old-fashioned plan of running molten wax down each side of a sheet of foundation held up against a solid top bar is fairly satisfactory, but not quite so. What, then? If all frames were wired—and if only every bee-keeper realised the advantages of wired frames, the slight extra trouble would not be found worthy of consideration—as they should be when full sheets of foundation are used, no further aid to fixing would be necessary, but as some will not "wire," and as some may wish at times to employ starters only, I have fixed upon a plain groove $\frac{1}{8}$ in. by $\frac{1}{8}$ in. cut in the centre of the underside of the top bar, as, all things considered, the best method; it is only necessary after placing the foundation in the groove to melt up a little wax in a teaspoon held over the lamp or gas, and run this down on each side of the sheet. If that foundation falls out you can kick yourself, as it will be your own fault, *always provided that the foundation is what it should be*, for I am sorry to say there is still bad foundation on the market, of which more anon.

Have I made out a case for a change? It is tedious work making frames, even although I have a 6-in. circular saw mounted on my lathe (with which I can slice up $1\frac{1}{2}$-in. mahogany without undue fatigue), but I'm waitin', oh! I'm waitin', for the progressive manufacturer who'll put my pet frame on the market and thereby earn the gratitude of—H. EDWARDS, *Shrubs Hill Cottage, Sunningdale, November* 11.

P.S.—If no manufacturer will put out such a frame, will those who feel the need of it, or would like to give it a trial, communicate with me. If there is sufficient call for them I will order a quantity in time for next season's use.

THE HONEY SHOWS OF 1902.

[4951.] Referring to Mr. Woodley's "Notes by the Way" (4932, page 444), I notice that in "Wax, &c., Classes," he specially refers to "mead, honey-vinegar, &c.," and states that "the same old stuff is staged year after year, &c." I beg to inform him that the mead and honey-vinegar exhibited by myself at the late Dairy Show was made by myself during the year 1901. I suppose he imagines it is "the same old stuff" because the bottles in which it was shown were the same in shape as those I always use in exhibiting mead and vinegar. He says, "The awards in mead and vinegar classes are given to mixtures which are bright and clear." How would he have them go? Would he like to see an inch of sediment in each bottle? I should think awards would go to mead and vinegar that tastes as good as it looks.

Mr. Woodley also mentions the "wax classes." Perhaps Mr. John Berry will have a word to say on this subject. There was a good deal of comment at the recent shows on wax and honey merchants competing at the late exhibition—almost as much as there was at the Grocers' Exhibition on the fact of Mr. Woodley, jun., winning in several classes with honey, wax, &c.

I am afraid this buying and selling of bee-produce for exhibition purposes will do no good to the craft. Several individuals have remarked to me that "Bee-keepers are at the 'Grocers'' on sufferance only," so I suppose it is best to let sleeping dogs lie.

Perhaps a word on the question of bees on "trophies" may not be out of place, especially as I thought one exhibit at the "Grocers'" should have been disqualified as a case of cruelty to bees on the show-bench. I should like to see it distinctly stated in prize schedules of future shows whether live bees

are to be allowed on "trophies" or not, so that exhibitors may know what to do in the matter. — H. W. SEYMOUR, *Market-place, Henley-on-Thames, November* 17.

EXPERTS AND FOUL BROOD.

A CASE IN POINT.

[4952.] I was struck with a remark made by Colonel Walker at the recent Conference of County Representatives about "the objection prevailing amongst some bee-keepers against having their apiaries visited by an expert for fear of infection." This reminds me of a case that happened in our county some years since. I wrote a certain Rev. Canon (alas! now no more) who owned forty hives, if he would like to have the experts call when in his neighbourhood. "No!" he wrote; he was afraid of infection, which "may easily be brought in the hair of his head." The expert, however, did call, just for a short bee-chat, and before he left the Rev. Canon allowed one stock — which was rather weak — to be examined, and, much to his surprise, the expert certified the stock as "badly diseased." Others were then examined, but no further disease was discovered; and thus the expert's visit, instead of bringing infection, was the means of preventing a bad outbreak of foul brood. In conclusion, I may add that after the Canon's death a healthy apiary was disposed of. May not the same thing happen to others as well as to our late member?—R. GODSON, *Hon. Sec. Lincs B.K.A.*

CARBOLIC ACID FOR FOUL BROOD.

RE-QUEENING FOR THE HEATHER HARVEST.

[4953.] Referring to the article headed "Notes from The Lake District," on page 453, your correspondent, "Heather Honey," makes a charge against "more than one expert" of using strong carbolic acid as a remedy for foul brood.

Having myself acted as expert more than once for the said district, may I be allowed to say I have never used crude carbolic acid, and have never advised its use? I certainly have visited one apiary where it had been used by two bee-keepers, neither of whom held a certificate, though they are first-class practical bee-men. I pointed out the mistake made in using crude carbolic, the effects of which they could see for themselves. The practice, however, ought to be stopped, and its bad effect explained, if it really is as "Heather Honey" says. I should advise your correspondent to report his experience to the Committee of the Lancashire Bee-keepers' Association, and let them deal with it.

The practice of re-queening stocks before sending them to the moors is a common one ere, and "Heather Honey" cannot do better than follow it up. By re-queening about fourteen days before the heather comes into bloom with a young fertile queen, and having at that time the hive full of bees, with brood-nest about half full of brood, and the other half full of stores, one is well and fully prepared for securing a good harvest of heather honey. — LUKE COLLINGE, *Turpin Green, Leyland, November* 15.

A BEE EXPERIENCE.

[4954.] I think the following experience may be of interest—and, perhaps, of use—to some of the more venturesome bee-keepers. On the 31st ult. I had occasion to disturb one of my hives; the day being cold, the bees only flew a short way, and one settled on my face, entered my ear, and got right inside, setting up a tremendous buzzing, the sensation being awful. Finding the bee beyond my reach, in trying to get it out with my fingers, I hurried to the doctor, who quickly got the bee out in pieces with the help of a syringe and hot water. The noise, however, seemed to continue for hours after the bee had been removed, and I am still slightly deaf in that ear. It was, I suppose, an unusual occurrence, and it any of your readers have had a similar experience they have my heartfelt sympathy. I like to hear the hum of my bees, but certainly do not like them inside my ear.—C. MORRIS, *Stanford-le-Hope.*

A LEICESTER ECHO.

[4955.] I notice in B.B.J. of November 6 that Mr. Woodley mentions having received letters commenting on the unfairness of appliance manufacturers in competing with ordinary bee-keepers in the honey and wax classes. I am entirely in sympathy with Mr. Woodley's correspondents. In saying this I do not necessarily infer that the exhibits in question are not the produce of the exhibitors' own bees, but it looks bad, and I have seen sections staged by manufacturers in competition so immensely superior to the rest shown as to cause me instinctively to wonder, "From how many thousands were these selected?" Not only this, but it is, to use a mild expression, grasping, not to say mean, for a large appliance-maker who is able to show scores of appliances, and to gratify to the full his lust for honours, to enter the lists in the classes which should be reserved for his customers. It is not to be wondered at if small bee-keepers do transfer their custom to non-exhibiting manufacturers, as, when you see large firms taking prizes or honourable mentions in about 50 per cent. of the classes, the odds are just a trifle too long for ordinary showmen. In penning these few lines, kindly note that I am not "a disappointed exhibitor," as it has never been my

luck (?) to be thrown into competition with the gentlemen concerned.

With regard to the condition of bees I endorse what others say about scarcity of brood this autumn. Stores were also short here.—GRANITE GREY, *Leicestershire, Nov.* 12.

BEE HIVES IN BATTLE.

SOME HISTORICAL REMINISCENCES.

Referring to the important part played by bees in the warfare of bygone ages, the *Standard* in a recent issue gives some historical reminiscences which will be read with special interest by bee-keepers of to-day. It says :—

One of the quaintest developments of mediæval warfare was revived in Brittany the other day when a party of peasants, defending a Roman Catholic school which the Government had ordered to be closed, used hives of bees as missiles against the troops. The idea seems to have originated in our own island of Great Britain, when somewhere about 908 A.D., a host of Danes and Norwegians, coming from Ireland, laid siege to Chester. The English in this city appealed in vain to their overlord, Ethelred of Mercia and his heroic wife Ethelfleda, the daughter of Alfred the Great. Ethelred, sick of mortal illness, could do nothing; and Ethelfleda herself could only offer good advice. Under Hingamund, their leader, the Danes set up hurdles beneath the city walls, and, thus protected, began to undermine the fortifications. When the English hurled down rocks upon their heads the invaders strengthened their hurdles by massive posts. The English retaliated by pouring down boiling mead and water, and when the Danes, in reply, covered their hurdles with hides, the English, as a last resort, gathered all the bee-hives of the city and flung them down upon their foes. This manœuvre was successful. "The Danes," says the old Irish chronicle, "were prevented from moving their hands or their legs owing to the number of the bees that stung them," and, in despair, they abandoned the siege. The next use of bee-hives in mediæval warfare occurs some thirty years later, in the days when Otto the Great was laying the foundation of the German Empire, in the lifetime of his first wife, the English Edith, who, singularly enough, was herself the niece of Ethelfleda of Mercia, mentioned above, and granddaughter of our English Alfred the Great. Somewhere about 940 A.D., Ghiselbert, Duke of Lorraine, revolted against King Otto, who was powerless to crush him till, assisted by one of Ghiselbert's own followers, Immo, the Ulysses of the age, who had incurred his lord's anger by craftily obtaining possession of a herd of swine. Ghiselbert, in wrath, laid siege to the stronghold in which his vassal lay, but was foiled by Immo's craft. "Immo," writes the contemporary chronicler, is reported to have collected a large number of bee-hives, and to have flung them "out against the Duke's horsemen. As the bees rushed out stinging the horses into such madness that their riders could not control them, Immo, looking forth from the walls, ordered his men to make a sally." The stratagem was successful in Germany as it had been in England thirty years earlier, and Ghiselbert, discomfited, raised the siege, declaring that if Immo had only been faithful he could easily have conquered all Lorraine, but, with Immo opposed to him, he could not be victorious even if helped by all the other people of the land.

A hundred and fifty years later, during the First Crusade, the use of bee-hives in warfare had permeated to the East. When Count Raymond of Toulouse laid siege to the Saracen stronghold of Marrah, some fifty miles from Antioch, the contemporary chronicler, Raymond's own chaplain, tells how, as the Christians moved up their scaling ladders to the walls, the Mohammedans repulsed them by slinging from their military engines "stones, and quarrels, and fire, and bolts, and bee-hives with their bees." This passage suggests a development of the earlier practice of merely dropping hives on the opponents' heads. And a similar use of military engines for slinging bee-hives is actually pictured in a remarkable English MS. preserved at Oxford, written in 1326-7 A.D. This venerable volume which, wrapt up in its long and flowing velvet cover, looks something like a baby-book in swaddling clothes, contains—on two pages fronting each other—towards the right, a picture of a number of bee-hives placed on a row, from one or two of which a few bees are seen to be issuing angrily ; towards the left, a mangonel placed ready in position for taking up the bee-hives on the opposite leaf and hurling them against the enemy. The same MS., it may be noted, contains the earliest pictorial representation of a cannon known to archæologists. But it is not from the pages of mediæval chronicles or on the illuminated leaves of mediæval MSS. that we gather our fullest and best accounts of the use of bee-hives in warfare. For this we must turn to mediæval romances—and first of all to the famous English rhyming poem of "Richard Cœur de Lion," written somewhere in the early years of the fourteenth century, almost at the very moment when the Christ Church MS. referred to just above was being copied and illuminated. In "Richard Cœur de Lion" we read how Richard I., King of England, when starting on the Third Crusade, had besides

> Two hundred shippes well vitailed [victualled]
> With forcë hawberks, swords, and knivës
> Thirteen shippës i-lade with hivës
> Of bees.

These hives, when he got to the Holy Land, Richard caused to be hurled from his man-

gonels against the city. The result must have surpassed his most sanguine expectations :—

The Saracens them armëd all
And ran anon unto the wall;
In white sheets they gan hem wrien [wrap themselves]
For the biting of his flyen [*i.e.*, flies=bees].

As the mangonels continued plying their fearsome missiles the Saracens become still more terrified :—

And hid hem in a deep cellar
That none of hem might come near.
They saw King Richard was full fell
When his flyen bit so well.

This passage is curious, amongst other things, as indicative of a fresh development in the art of bee-hive warfare, for in it we find bees used on the offensive by the attacking party, and not merely confined to the defenders.

More remarkable still, however, is the account given of the use of bee-hives in the enormous fourteenth century poem of "Godefroid de Bouillon." This colossal work by some unknown Belgian poet is about three times as long as "Paradise Lost." Towards the conclusion Godfrey of Bouillon and the other Christians are represented as sieging Acre, but to little purpose till at last Bishop Adhemar, of Puy—the Aaron of the First Crusade, as Godfrey was its Moses—tells his comrades he has had a dream. In this dream he received a miraculous indication of the best means to be adopted for capturing the stubborn fortress. The bees on this occasion were to be collected not merely in their native hives, but—with a skilful allusion on the poet's part to the local industries of his own Low German home at Namur and its neighbourhood — we are reminded how at the brewing-season wasps and bees and other stinging "flies" were wont to swarm into the vessels in which the sweet-savoured beer of the Middle Ages was brewed. Let them adapt this home truth to the exigencies of foreign warfare, and, trusting not to Nature's bee-hives alone, bottle up the insects which restored their good wives' industry at home for use against the enemy abroad. "All round us," urged the Bishop, "there is an abundance of bees. Let us take them and hurl them from our engines over the city walls. So shall we keep the Saracens off while we are undermining their fortress." When the Bishop had thus spoken, the poem continues, "all the noble princes burst out laughing, with a shout, 'Hurrah for the good Bishop! He has found it written in his Psalter that we shall take Acre by bees.'" Twenty-five mangonels accordingly were brought up, and all commenced slinging their bee-hives at the same moment. The "flies," we are told, went swarming everywhere, buzzing into the Saracens' ears, stinging them on the eyes, and torturing them so that they fled incontinently from the ramparts. Soon there was neither woman nor child that dared to leave their houses; while the men were, if possible, more terrified, crying out, "We cannot endure it any longer; these bees are eating us up. May Mahomet curse the man who hurled them amongst us." The Sultan, in despair, called for his great galley, and fled away in terror to Ascalon by sea. The Christians broke through the walls, and "in this manner was taken and conquered that noble city which is called Acre. Thus, by bees was the city taken and subdued."

Queries and Replies.

[3001.] *Bee-keeping for Profit.*—Having just read your "Guide Book," I have become interested in the subject of bee-keeping, and will be obliged for a little information. I am a native of Somerset, and have a good opportunity of putting up a number of hives, but although taking up the industry for pleasure, I have not sufficient means to go in for it unless there is some profit attached.

As a reader of the BEE JOURNAL for a short time and a mere novice, I have not yet seen it stated what the average profit per annum from a well-regulated hive ought to be; hence my questions.

Will you therefore kindly say:—1. How many hives, properly managed, would be required to yield a profit of £50 per annum, reckoning the sale of honey produced, also proceeds from sale of swarms, queens, stocks of bees, and wax? 2. Is there a ready market for first-class comb-honey on a large scale, on the London market, for instance? 3. Would a five weeks course of instruction be the quickest and most economical way of gaining an insight into the industry? The course I refer to is that given at a college in Reading.

I have put the questions in numerical order to give as little trouble as possible in replying. —S. C., *London, November* 14.

REPLY.—1. The question of how many hives will bring in an average profit of £50 per annum depends so much on the bee-keeper himself and the district he works in that it is impossible to lay down a reliable rule that will work out well. The introductory chapter in "Guide Book" contains the gist of all that can be imparted on the subject beyond a perusal of the varying experiences of those who are actively engaged in the pursuit as recorded from time to time in our pages. We may say, however, that it would be necessary to keep a good number of hives if the business is to include all the various branches of the trade enumerated by our correspondent, and we should advise his devoting himself to

honey-production alone until sufficient experience has been gained before including queen-rearing and sale of bees. Moreover, it would be sheer folly for a beginner to set up fifty stocks of bees before he has learned how to manage half-a-dozen properly. 2. It is only fair to say that, to our knowledge, there is no ready market for comb-honey on a large scale in London. Honey stands on the same footing as other branches of produce. Markets have to be found, those available being fairly well looked after by well-known honey-producers already in the field, so that new-comers have—as in all other trades—to take their chance in the general competition around us. 5. Yes; moreover, it is a *sine quâ non* that the instruction be both theoretical and thoroughly practical to be of real service in your case.

[3002.] *Subduing Vicious Bees.*—1. Can you explain my failure to subdue a stock of bees a short time ago when placing bars on top of frames in place of winter passages? I used smoke at entrance and on top of frames, and because they were inclined to be bad-tempered I then gave the bees some very thin, warm syrup, poured in between frames, leaving them some minutes before again raising quilt, but they were very little better, and it was only after a third application of smoke that I succeeded, with the loss of a few bees. In my other apiary of nine hives, in Kent, I used a carbolic cloth and the carbolic fumigator when taking honey this autumn, and although I carefully followed instructions given in hand-books (this being my first year of bee-keeping), I was rarely successful in more than partially subduing them. I am aware, of course, that bees are more irritable at that time of the year than at any other. Is my probable fault too little carbolic or too much haste after fumigation? *Decoy Hives.*—2. Is there any law preventing people from placing empty hives in their gardens as decoys to catch their neighbour's swarms? I am told there is not, and if this is the case, it would be worth while to put some empty hives near by to catch any truant swarms that may escape without notice. Has this been found practicable? I have lost several swarms, and in each case they went to the nearest hollow tree. *Bee Nomenclature.*—3. I enclose a couple of bees taken from different hives. Can you tell me their respective breeds?—H., *Biggleswade.*

Reply.—1. If the bees in question are naturally vicious—as some stocks undoubtedly are—we should attribute your failure in a great measure to lack of experience. The operation in which you were engaged is of so simple a nature that an expert would probably have it done before the bees had a chance of becoming roused to viciousness. To pour "warm syrup between the frames," as stated, was the very thing likely to start the trouble complained of, and, once started, the attempt of a beginner to subdue such trouble often ends in his adding to it. The same remark applies to the use of other intimidants than smoke. Personally, we never use any other subjugator than a good smoker. 2. There is no law we know of to prevent the use of "decoy hives," except the unwritten law which makes it wrong to try and obtain possession of what is not our own. Your bee-keeping neighbour would justly resent "decoys" being set to catch his swarms, as you would, no doubt, yourself, bearing in mind that bees often search out a home when preparing to swarm, and not seldom make straight for such when found prepared ready for occupation in a neighbouring garden. 3. Beyond a very faint trace of foreign blood in one of the bees sent, they are of the common, or native, variety.

[3003.] *A Novice's Queries.*—I should be obliged if you would answer the following in B.B.J.:—1. On opening my hive (I have only one) a few days ago I saw cells in brood-nest which were partially filled with a substance the colour of thin glue; would this be dark honey? 2. Should hive entrances be contracted during winter months? 3. Is any sound wood suitable for making hives, or is "pine" best, and, if so, why? 4. Can you give me name and address of secretary of the County Association? 5. Can you tell me of any article on hive-making likely to help me? I am a novice at bee-keeping, having bought a swarm last summer. I much appreciate Bee Journal and *Record*, and find them a great help.—R. B. Dart, *Great Missenden, Bucks, November* 12.

Reply.—1. The probability is that the glue-like substance in cells will be pollen that has had a covering of honey. 2. Yes. 3. Yellow pine is best for hive-making because white pine, or "spruce," is more liable to shrink and crack than the former. 4. There is no county B.K.A. in Bucks of which we have any knowledge. The hon. secretary of the Berks Association is Mr. D. W. Bishop-Ackerman, Reading. 5. Articles on "Hive-making" have appeared in former issues of B.B.J., and may be had on application at usual price.

Echoes from the Hives.

Tothill, Alford, Lincs.—Although we have done better with our bees in Lincs than some counties, particularly in the West and North, I have not had so much autumn feeding to do myself for several years as this season, some stocks having little or no stores in the brood-nest. It has been a most peculiar season; stocks that were not very strong in time to catch the early honey-flow gave no surplus at all. Although clover was most abundant from

the second week in July to the middle of August, I never saw so much clover bloom—the fields were white with it; but notwithstanding the luxuriant bee-forage, we have very little clover-honey in these parts.—R. G.

IMMUNITY TO BEE-STINGS.

That a person who has been often stung by bees becomes in time immune to the poison of the sting is asserted by Dr. H. F. Parker in *The Medical Times* (October). He reports that when he first began to keep bees he was frequently stung, and that each sting was attended with acute pain, but that as time went on the pain and swelling became less. In the following year, while transferring a hive of bees, he had an experience which he thus relates:—

"Sting followed sting in succession, in legs, arms, fingers, neck, and face. I imagined what a picture I would present, with closed eyes and swollen hands and feet. I worked on, however, and so did the bees. I could feel the needle-like thrust, but then it did not seem to pain as much, and at last I finished my task. With aching head, slight nausea, and vertigo slowly coming on, I gave a sigh of relief for what was accomplished, and filled with wonderment as to what my personal appearance would be.

"Imagine my astonishment to find merely slightly raised red spots, like little pimples, with the sting in the centre, as the result of each and every sting. I must have had something like forty of them on various parts of my body. My clothes were full of them, but the material being so thick, did not allow the stings to penetrate. The dizziness, nausea, and headache left me, and 'Richard was himself again.'

"When I again visited my bees, I did not dread the stinging properties any longer, at least not as much so as formerly, and then, and ever since, I have found that when a bee *does* sting me, the pain is only sharp for an instant, and there is an absence of the after-swelling. . . .

"I have since been stung many more times than I was at that time, and yet none of the symptoms above referred to have been reproduced. Am I not, therefore, immune to the poison of the honey-bee, at least to a certain extent?

"All authorities on bee-culture state the fact—as a crumb of comfort to novices in bee-keeping—that the poison of a bee will produce less and less effect upon their systems. 'Old bee-keepers,' it is said, 'like Mithridates, appear almost to thrive upon the poison itself.' Huish speaks of 'seeing the bald head of Bonner, a celebrated practical apiarist, covered with stings which seemed to produce upon him no unpleasant effect.' Rev. Mr. Kleine advises beginners to allow themselves to be stung frequently, assuring them that in two seasons their systems will become accustomed to the poison. . . .

"In conclusion, let me state that I firmly believe that the bee-keeper becomes inoculated with the poison of the bee, and usually becomes proof, or at least immune, against it, is no more to be doubted than the fact that vaccination is a preventive against smallpox."—*Literary Digest* (New York).

AUSTRALIAN HONEY IN LONDON.

[The following letter appears in the *Melbourne Leader* of September 6.—EDS.]

SIR,—My attention has been drawn to an article in a daily paper, under the heading of "Sweets to the Sweet." Making some allowance for embellishments, the facts are, no doubt, as stated, but they are not new, for Victorian apiarists have been well aware of this state of affairs in London for a considerable time, and the Victorian Apiarists' Association has made every possible effort to overcome the difficulties in the way. Mr. Gregson, from whom the writer of the article obtained his information, is convinced that it requires capital to obtain an output for our honey in England, and suggests £5,000 as the amount necessary. This has been exactly the view of this Association, even to that amount. But so far as the Department of Agriculture is concerned we have very little hope at present. Some six months ago the Victorian Apiarists' Association cautiously approached the Department of Agriculture on this subject, and received, before even mentioning financial assistance, the disappointing answer that the utmost the department could do for the bee-keeping industry was to arrange for shipping space for our produce. Some time previously the department invited bee-keepers to forward sample packages for the Agent-General's office in London, each lot labelled with the name and address of producer, so that orders could be forwarded out to him.

Now, anyone at all acquainted with honey-production knows that it is not grown or produced at will, but can only be obtained when Nature provides the nectar, which she does in Australia in an uncertain, fitful way. Some seasons our yields equal, perhaps even exceed those of any other country, but there are also seasons of total failure. These facts have to be taken into account in any attempt to open up an outside market. The excess of a good season will have to be held over for the succeeding poor one, otherwise we shall lose again the customers we have won, and begin again afresh, when we have another surplus of production. Therefore nothing can be done without capital. Producers cannot hold their honey or find the capital.

There is another difficulty in the fact that probably no other country has as many different

flavours, colours and varieties of honey as Australia. Honey differs so much, not only between different localities, but in the same apiary in different seasons, that an apiarist sending, say, red gum, yellow box or grey box honey to London, could not supply the same sample the following season. Hence a system of grading and possibly blending would be inoperative to ensure anything like uniformity of character. This matter also was suggested to the Department of Agriculture, and declared outside its province.

Having failed to obtain the assistance of the Agricultural Department in these two matters, we would suggest as an alternative some investigations and experiments for the reduction of colour and the excess of essential oils in Australian honey, so that it may compete on even terms in the markets of the world—with American or European honey whenever we have a surplus in Australia, thus avoiding the necessity of employing capital to keep up a continuous supply for customers educated to a taste for the characteristics of our honey.—Yours, &c., R. BEUHNE, Correspondent, Victorian Apiarists' Association, *September* 2, 1902.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column

*** We have been requested by the Secretary to invite the attention of members of the Warwickshire and the Worcestershire Bee-keepers' Associations, and of others interested in bee-keeping, to a meeting in connection with the Midland Pharmaceutical Association, to be held at the Mason College University, Edmund-street, Birmingham, on Thursday, November 27, at 8 30 p m., Sir James Sawyer in the chair, when a lecture on "Scientific Bee-Culture," illustrated by lantern slides, will be delivered by Mr. H. S. Shorthouse, F.C.S. There is no charge for admission.

J. B. PEACOCK (Darlington).—*The Profits of Bee-keeping.*—Much obliged for cutting sent, but with regard to publishing same in B.B.J., as suggested, we may remind our correspondent that much of the information contained in the interesting article referred to has, we think, been gathered from our own columns from time to time, and it would thus be reprinting matter already familiar to our readers. A report of the meeting of Northumberland and Durham bee-keepers on October 4 appears on page 419 of B.B.J. for October 16.

"ROCKS" (Halifax). — *Hive Making.* — 1. Particulars for making the hive mentioned by the Rev. W. Hand (on page 445) appeared in B.B.J. of June 24 and July 1, Vol. 25. The two numbers may be had from this office. 2. For information regarding the "Wells" hive and the system of working it, write to Mr. G. Wells, Eccles, Aylesford, Kent, who has published a small pamphlet on the subject.

J. H. HORN (Bedale, Yorks).—*Honey Cures.*—If you care to send a sample of the pills mentioned to "Westerner" (who writes on page 459) we will forward his address on receipt of post-card. The other particulars sent are hardly suitable for the pages of a bee journal.

J. J. W. R. (St. Albans).—*Show Reports.*—The report as written is not suitable for publication, seeing that the judge—upon whom somewhat disparaging reflections are cast—was, we presume, duly appointed by the show committee, to whom any complaint against the awards should be made. Moreover, we can rarely find room for reports of flower shows at which only a couple of classes for honey are included.

G. GELDARD (Liverpool).—*Bee Districts near Liverpool.*—We are glad the help we promised has been forthcoming. Mr. Anderton is well acquainted with the locality, and can speak with authority on the subject. With regard to the other gentleman named, there must be a misunderstanding somewhere, which a line from yourself to him would no doubt clear up, without unnecessary publicity. We will forward your letter, and ask that a reply be sent by post if you approve.

[Since the above was in type, we have received the following from Mr. W. Corkhill, a bee-keeper long resident in Liverpool:—"In reply to your correspondent, Mr. Geldard, I beg to say there are several good districts for bees near Liverpool—among them West Derby, Walton Hall Estate and neighbourhood, Sefton, Aintree, Maghull, Aughton, &c. I prefer the neighbourhood of Aughton, on the Preston road, as being the best district for white clover within twelve miles of Liverpool, It is close to Town Green station on the L. and Y.R., about two miles from Ormskirk."]

Honey Sample.

A. T. (N.B.)—Honey is of good quality, but badly needs straining through fine muslin—to remove the numerous particles of what looks like specks of pollen—in order to make it suitable for table use. There is no trace of heather honey in sample.

Suspected Comb.

J. ALDERSON (Lancaster).—Comb contains nothing worse than mildewed pollen.

Editorial, Notices, &c.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 105, Jermyn-street, S.W., on Thursday, November 20, Mr. H. Jonas in the chair. There were also present the Hon. and Rev. Henry Bligh; Dr. Elliot: Messrs. W. Broughton Carr, H. G. Morris, W. F. Reid, E. D. Till, E. Walker, and the Secretary. Letters explaining absence were read from the Vice-Chairman, Mr. T. I. Weston, Miss Gayton, Rev. W. E. Burkitt, Messrs. R. T. Andrews, W. H. Harris, and F. B. White.

The minutes of the previous meeting were read and confirmed.

The following new members were elected, viz.:—Mr. Hugh Cleaver, The Hill Farm, Much Hadham; Mr. L. Illingworth, 26, Creswick-road, Springfield Park, Acton, W.

Mr. Jonas presented the Finance Committee's Report, which was adopted.

The Secretary reported that examinations of twenty-five candidates for second class expert certificates were held in ten centres on November 14 and 15, and that the papers had been duly forwarded to the examiners. Applications for other examinations in December and January were received, which the Council were unable to accede to.

The Council proceeded to further consider the proposals for the next Royal Show, together with a number of suggestions received from county associations. The draft prize schedule was completed for submission to the R.A.S.E. A very lengthy discussion ensued upon matters arising out of the conference held in October last, especially the proposal for the establishment of uniform returns from each county, and the preparation of a uniform set of instructions for the use of experts when visiting members apiaries. The Secretary was instructed to prepare a form embodying the most important features contained in the specimen forms received from various societies prior to a final decision in the matter.

After a prolonged sitting the Council adjourned until Thursday, December 18.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

COMMENTS ON CURRENT TOPICS.

[4956.] *Ericas as Honey Plants.*—All that I had seen in past years led me to doubt whether *Erica cinerea* or *Erica tetralix* were honey-plants at all, and I believed that *Calluna vulgaris* (ling) was the only heath yielding of its sweets to the bees. I have considerable stretches of both *Erica cinerea* and *Erica tetralix* within easy reach of my hives, but (perhaps, from not observing the matter properly) I never took note of bees working on either. Lately, however, Mr. Crawshaw, in describing a visit to Mr. Lancelot Quayle, of Glenmay, I.O.M., says that the latter "maintains that his heather-surplus comes from the bell heather, not the common ling (*i.e.*, *Calluna vulgaris*)." This positive statement coming from so excellent a beeman and coupled with the recollection of a previous assertion of his that he *extracted* his heather honey made me look closer into the matter. Our Highland heather honey gathered from the true heath, *Calluna vulgaris*, will not extract, as a result of applying centrifugal force to the combs, being far too thick in consistency even when newly gathered. It only leaves the cells, and with signs of regret, when pressure is brought to bear sufficient to destroy the combs. At times in previous years I have come across a small quantity of honey gathered early in the season darker than clover, lighter than heather, and lacking in several characteristics of the qualities of a blend of the two. Recollecting these facts I spent several hours on successive days in August, before the true heather was in full flower, and discovered a fairly good number of bees working on *Erica cinerea*. I knew they were not likely to be gathering pollen from the flowers, as it yields an insignificant quantity, and pollen bearing plants were abundant, but close observation showed me clearly they were visiting the flowers for their honey. The well-known movements of the body when the act of sucking is going on clearly revealed that they were rifling its sweets, and judging from the time the movements were going on they were acquiring it in fair quantities. Close inspection of the combs in the hives later on in the afternoon showed me appreciable quantities of the newly-gathered sweet of the distinct colour and consistency I had previously noted. I have since examined it in a ripe state, and have come to the conclusion that it will readily extract. It, however, differs in several important points from true heather honey. Its colour is duller and not so pronounced as the vivid bright amber shade of the other. It is not so dense, has not the consistency of true mountain heather honey, and is, of course, considerably thinner and more liquid. The distinctive aroma of true heather honey is all but lacking, the aroma here being very faint—the mere essence of a scent. The taste is too mild and unpronounced to tickle the palate or to convey to the senses the sharp and full flavour of the product of the true "ling." Perhaps Mr. Lancelot Quayle, who handles it in quantity, can enlighten us on these points, and correct me if I am wrong in

my deductions, as my evidence up to date is too limited to give anything like an authoritative statement. I do not approach the subject with any bias in favour of calluna, and would indeed be glad to establish this erica as an undoubted honey-plant, as in the old clan days it was the badge of the Macdonalds, so I have a tender spot in my heart for this lovely flower —the grand heather bells of Scottish song and story. I have never seen bees work on *tetralix*, but this may be accounted for owing to its frequenting lower and damper locations. Even the true heather forgets to secrete nectar when it grows on low, marshy or boggy ground.

Jottings.—1. No one understood better than he how to hive up the honey of good talk wherever he met with it. 2. Kindness in ourselves is the best honey that blunts the sting of unkindness in others. 3. As the bee collects nectar and departs without injuring the flower or its colour or scent, so let a wise man dwell in his village. (From the "Book of Buddah.") 4. Conundrum—How does a bee resemble a merchant? She sells (cells) her honey. 5. The same facetious friend who gave me the conundrum to speculate over assured me with the utmost solemnity that he saw a bee a few days before on the very top of Ben Nevis. I expressed grave doubts of the accuracy of his statement, but his assurances were so emphatic that my scepticism had to give way, though the merry twinkle in his eye as we parted revived my doubts. I got an explanation of the riddle a few days later on reading the meteorological report, which was signed, "William Bee." 6. He saw his divinity surrounded by tiresome bees, who hummed about the fairest flower of the season, basking in the honey d sweetness of her frank smiles. 7. The hot sunshine without, and the drowsy humming of bees floating in at the open window was charged with hints of slumber to the middle-aged. 8. To one who has known and loved them, a summer where there are no bees becomes as sad and empty as one without flowers or birds. 9. M. Maeterlinck describes the drone as follows:—Indelicate and wasteful, sleek and corpulent, fully content with their idle existence as honorary lovers, they feast and carouse, throng the alleys, obstruct the passages, and hinder the work; jostling and jostled, fatuously pompous, swelled with foolish, good-natured contempt.

Skep Covers.—One of the neatest, simplest-made, and most effective can be constructed from a piece of felt. If marked off in a circle and cut three-quarters round, the remaining part cut down to the centre line can be joined so that it becomes a perfect cone. This, placed over the skep, guards it from all damp. Directions for cutting out these covers are given by Cheshire, Hunter, and Taylor. Many skep covers are fearfully and wonderfully made, and though from an artistic or picturesque view they may look well, especially when distance lends enchantment to the view, a very little expense would make neater and tidier ones, and, better still, make them effective as excluders of rain and damp, which act so much to the detriment of the stock.—D. M. M., *Banff.*

THE NEW "ROYAL" SHOW YARD.

[4957.] Though not inclined to say anything by way of damping the energies of those who have worked, and are working to secure for the "Royal" Show, and the several minor exhibitions connected therewith, a permanent home, I would point out that, while accepting the axiom, "A rolling stone gathers no moss," it is, I think, by moving from county to county all over the kingdom that the "R.A.S.E." maintains and increases its membership. But I am thinking mainly of the B.B.K.A., which has secured many new members and gathered moss in the form of subscriptions through the shows taking place in various counties. There are, no doubt, numerous benefits connected with a permanent home, but with regard to the bee-industry the question is, will a "Royal" show held near London year after year benefit bee-keeping to the same extent as by going among the bee-keepers of different counties? The same exhibitors of honey and appliances will, no doubt, send entries from John O'Groat's and all the country between there and London, to the permanent home of the "Royal," but will not the B.B.K.A. be to some extent deprived of the means of conveying to the uninitiated the knowledge of modern methods which make bee-keeping a success?

If, under the new arrangement, the B.B.K.A. ceases to carry knowledge to the people, as it has done in the past, what inducement is offered to the dwellers in remote counties to visit the show or even be informed of the existence of the British Bee-keepers' Association? Will the latter be in a position to make a money grant to be expended in a different county each year, as is now done, in lieu of the present benefit to be withdrawn? The Association may by a course of lectures in different centres help those whom it will otherwise cease to reach, and in this way make its existence known, and should "gather moss" in spots where the best "moss" grows, but hardly so well as under present conditions I fancy—places where dwell the class of persons who cannot come to London for information. Localities where tons of nectar are wasted yearly because there are no bees to gather it, or where existing bee-keepers lack the information that would help them to success. The "rolling-stone" maxim is good in its way, but there is more than one kind of "moss." One kind gathers upon fixed objects; another—the best, I think—is secured by searching for it in distant and out-of-the-way places. On the other hand, we must not forget that the B.B.K.A., though in other directions powerful, is not strong financially,

and must, I suppose, lean upon a Society that is strong in that respect. For this reason, I suppose, the alternative is forced upon the B.B.K.A. of accepting the lesser evil.

The grouping of counties seems to be a step forward.

"*Wanted, a Frame.*"—Time, by which so many things are proved, has established the usefulness of our "Standard" frame. It has also shown that this frame may, with advantage, be improved by strengthening it. But I think we should not dwell too much upon the defects of the "Standard" frame as made according to the dimensions adopted by the B.B.K.A.

We bee-keepers are not a little indebted to those who, five-and-twenty or more years ago, gave their time to the consideration of a uniform frame for general use. Those pioneers, after long and full consideration of the question, gave the benefit of their knowledge and experience for the good of bee craft in general. The acknowledgment of the benefits thus conferred upon the whole industry by the use of a standard frame is a duty none will deny, and it is no less our duty to point out and remedy defects, if such are after long experience proved to exist. This may be done without reflecting upon the judgment of those who designed a frame the usefulness of which is so widely recognised that bees on combs built in frames of an obsolete pattern are to-day practically unsaleable.

The dimensions of the frame adopted by Mr. H. Edwards, and referred to on page 463, will, I believe, meet with the approval of most bee-keepers, but for myself I would prefer the bottom bar a little narrower if the top and side bars are to be of the dimensions given.

The Saw-cut in Top Bars.—With regard to the saw-cut, so much abused by Mr. Edwards, my experience—obtained among bee-keepers in all stations of life—is dead against his, and goes to show that a standard frame without the saw-cut would, to the beginner at least, be as a blessing half withheld. I could say a good deal on the use and abuse of the "saw-cut," but, to be brief, I should object to the adoption of a standard frame without it. Solid top bars are all very well in the hands of a few, but numbers claim prior consideration. With good bee-keeping, trouble from the wax-moth need not be feared through the saw-cut. I do, however, sometimes see—in apiaries run on the let-alone system, with old propolis-bedaubed quilts several years old—top bars damaged by the larvæ of the wax-moth, and the saw-cut making a cradle for the same.

I agree with Mr. Edwards upon the advantages of wired combs. But where do these advantages come in, even if a stronger frame be used, if the frame is mutilated by cutting the bars half through to let in the wire? Yet in this way a strong frame is made weak by some prominent bee-keepers in the process of wiring.

Since penning my remarks on the "Royal" Show, I am glad to have learned that the B.B.K.A. do not propose to incur any heavy expenses at the new show-ground of the R.A. Society until it is seen how the new conditions work.—W. Loveday, *Hatfield Heath, Harlow.*

FRAME CONSTRUCTION.

[4958] With regard to the particular form of frame advocated by your correspondent, Mr. Edwards, on page 464 of last week's B.J., if he will place an order for a definite quantity, or guarantee to take a certain quantity during a season, sufficient to pay an appliance manufacturer to make them, he will have no difficulty in getting his order executed. I should, however, like to say that one of the principal reasons why no manufacturer has taken upon himself to manufacture such a frame is that it has not been approved by the Council of the British Bee-keepers' Association, and until friend Edwards can induce that body to approve of the frame, after testing it for themselves, the Council will never recommend it as an improvement over the B.B.K.A. "Standard" frame, which, after full consideration by a special committee appointed for the purpose, was adopted as the best for all-round purposes. Without this approval, Mr. Edwards's suggested frame will not "catch on," as the Council's opinion and advice justly carries great weight with bee-keepers generally. Every year various suggestions are made with regard to altering the size of frames by different persons, which suggestions are, of course, quite right and proper to make; but I do not think due consideration is given to the mess and tangle bee-keepers would get into if there were several different sizes and shapes of frames catalogued, and put on the market, as was the case several years ago.

Before the "Standard" frame was adopted, appliance makers to a great extent followed their own ideas with regard to the size of frames—consequently hardly a hive or frame from different makers would interchange with one another, and thus the interchangeability which is such an essential and important part in the proper working of an apiary was lost to the bee-keeper. I am glad to say this bad state of things has now happily almost died out, for I know of no more annoying, and irritating, and unpleasant things to a bee-keeper, or one that gives him such a "warm quarter of an hour" than when one goes to pack a stock of bees in a travelling-box made to take the orthodox "Standard" frame, and finds the frames a bit too large, &c., and which means having to cut them down to proper size with scores of angry bees flying around.

Personally I think the "Standard" frame, as at present made, could be slightly improved, but unfortunately all bee-keepers do

not think alike, and until they do I say "let us stick to a uniform 'Standard,' which we have now got, and so, while securing interchangeability, we shall avoid the trouble caused in the past for lack of this desideratum."—E. H. TAYLOR, *Welwyn, Herts, November 22.*

BEESWAX FOR THE SHOW-BENCH.

CRITICISING EXHIBITS.

[4959.] Referring to Mr. Woodley's "Notes" on the exhibits of beeswax "suitable for the retail trade," in B.B.J. of November 6 (page 444), I expected some one more able than myself to say a word on his, to my mind, unjustly adverse remarks, but as no one has taken the matter up so far, I beg to say (as one of the most frequent exhibitors of wax for the last few years) that Mr. Woodley is greatly mistaken in his assumptions. In the first place, he assumes, and distinctly says, that "first-class wax takes the award" against "good commercial wax." I can, of course, speak only for myself, but I never staged any but my ordinary wax in this class, after the schedule stated that the judges only needed "commercial wax." As to not having any similar wax to dispose of, as Mr. W. says, I sold about 80 lb. to a firm only last week, all quite as good as that in my exhibit at the Dairy Show (in the class for wax suitable for retail trade). I think, however, the time is not far distant when the judges must give some consideration to quality in this class also. I mean when the form of cake and suitability of package has reached some standard of excellence.

Then, with reference to the "extra good sample of wax" that he mentions, I do not find any difficulty in getting it. Give me good clean combs or cappings, and I can make it all fit for showing, and that, too, without any "doctoring." Therefore, every bee-keeper has the same chance as myself.

As to "trotting out of the same sample to show after show as each year comes round," Mr. Woodley is again manifestly unjust to his brother exhibitors. Not only so, but his contention cuts both ways, for he lays himself open to the fair retort that good sections could be "trotted out to show after show" in the same way. Speaking for myself, my experience is that I could send the same lot of sections, or of extracted honey, to more shows than I could the same exhibit of beeswax. In the first place, it is very seldom that we get all the cakes of wax returned from shows, the reason given being that some one has been helping himself to it. (Mr. Woodley is probably aware that I lost my whole exhibit of first-class wax at the show of his own County B.K.A. at Reading this year, and it was not delivered from the show-tent to the railway company.) But even in cases where all is returned, I find that the same wax is not fit for staging at more than two or three shows; indeed, I have had several lots spoiled for exhibition purposes after a single show, so much is the wax knocked about and discoloured at times. In conclusion, I would like to see a word on this point from some other wax exhibitors who may have had similar experience to myself.—JNO. BERRY, *Llanrwst, N. Wales, Nov. 21.*

A BEE EXPERIENCE.

[4960.] Referring to the letter headed "A Bee Experience," on page 465 of this week's issue, I can heartily sympathise with your correspondent, the same thing having happened to me five years ago. For about three years afterwards I invariably used a veil when manipulating, but am afraid I have now got more venturesome, as I often open my hives without any protection.—FRED S. GIFFORD, *Brentford, November 21.*

(*Correspondence continued on page 476.*)

HOMES OF THE HONEY BEE.

THE APIARIES OF OUR READERS.

The view of Mr. Standring's apiary on next page comes as a seasonable novelty in bee-garden pictures, and though too wintry to be typical of the weather of to-day, it may prepare us for the long and severe frosts foretold by the weather-wise. For the rest, the following copious "notes," written at our request, need no addition from us:—

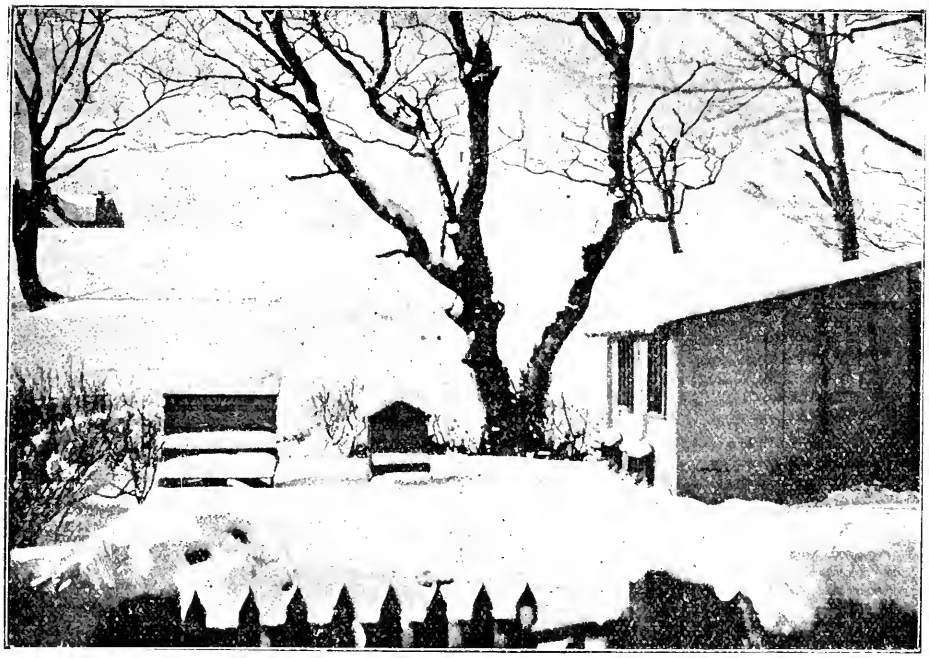
"During the year 1895, while on a visit to my brother at Dewsbury, in Yorkshire, I was first introduced to bees and their homes, and like many other unvaccinated mortals I took the disease sometimes called bee-fever, and mine must have been a severe attack, as it is worse to-day than ever. Before leaving Dewsbury I took in quite a large cargo of information on bees, but the portion retained on my return to Blackpool was very small. However, I prepared to start for the next season of 1896 by purchasing hive, foundation, &c., and a swarm of bees from Mr. J. Howard, of Holme; but with only a July swarm surplus honey was, of course, out of the question for my first season. Next year I bought two more swarms and got one from the old stock, so this made up my apiary to four stocks at the end of 1897. In this year, as in all cases with me, I have never been able to get any surplus from a swarm during its first season.

"My brother paid me occasional visits, so timed as to help me with the bees until I could manage them myself. During one of these visits an incident occurred that may afford a useful lesson to beginners like myself. We were examining one of the hives, my brother wearing his bee-veil only, while I had the protection of both veil and gloves. Thus considering myself bee-proof against stings, I kept close up in order to see all I could and

render any little help required; but very early the bees seemed to take a great liking to myself, and came buzzing round me in good numbers, but being 'safe,' as supposed, I felt no alarm; but it so happened that my veil was badly fixed, and there was a flaw in my guard which the bees were not long in discovering, and a good number getting inside several displayed their 'attachment' for the disturbers of their hive in the usual way by attaching themselves to the operator. I made off with all speed, as you may guess, but a lot of bees followed me viciously. In the end, however, I gradually got rid of all, including those inside my veil, though the latter left their 'attachments,' *i.e.*, stings, behind them. Meantime my brother worked away at the hive as though there was not a bee within a mile of him, and took no harm whatever! He removed about twenty stings from my face and neck. I then fixed up my veil securely, after which I helped to finish the work in comfort. Moral: In bee-work don't do things by halves. During the year 1898 I got from the old stock and from my four colonies about 90 lb. of surplus-honey and two swarms, and was, in consequence, very proud of my bees and their work. Up to this time my hives were located in the country, over four miles away (with no train or tram available), and, after the long journey on foot, rain has come on and stopped all chance of doing anything with the bees, so I decided to build a bee-house and get the hives nearer home, where I could see to them more readily and with more comfort. I secured a place just on the edge of the town about twenty minutes' walk away, and got the bees moved in due course to where they are seen in photo.

"In the following season (1899) I got only a very small amount of surplus owing in some measure to removal, and, being short of honey to supply the customers I had got, I bought some through an advertisement in the B.B.J., but when received it was such poor stuff that I dare not offer it for sale, and used it to feed the bees with. This has rather shaken my confidence in trusting to advertisements without first getting samples. In 1900 two swarms issued, thus increasing my colonies to six, but I only got 70 lb. of honey and no swarms in my first season near town; not very satisfactory, considering that in addition I lost two during the winter, and also was compelled to remove the bees. Before doing so, however, I had the photograph taken by my brother, and, as will be seen, there was at the time about 5 in. of snow on the ground.

"The year 1901 found my hives back again on the old stand, four miles away. During that season my best stock became queenless, and, after giving the bees a frame of brood and eggs for queen-rearing (as the brood in their own hive was too old for the purpose before I found out the loss of queen) without result, I gave a second frame, with no better success;



MR. WALTER STANDRING'S APIARY, NEAR BLACKPOOL, LANCASHIRE.

but while examining the brood-combs I spied a sealed queen-cell, nearly buried away down the side of the frame. The egg or larva must have been carried into the cell, as there was, I think, no brood young enough near at hand for queen-raising. I also had a case of two queens in one hive last year. I watched them for eleven days, and then, in order to secure the younger queen of the two from taking flight, I clipped her wings and then returned her to the other end of the hive, where I knew the old queen was. Ten minutes later it was turned out dead! I got 173 lb. of surplus honey in 1901 from five hives, but I took all I could get, and had to feed up heavily in consequence. I have been as careful as possible in attending to the bees during the present year of 1902, considering the distance to walk and the fact that my time is not always my own. The result is I have been able to secure about 200 lb. of surplus honey, besides a swarm and a cast, and am very well satisfied. I had some idea of trying to qualify for an expert, but must wait till I get more experience, never having had occasion to drive bees or seen anything of foul brood, and I take it that one needs practical experience of these things, among others, to be successful. With regard to selling honey, I have been less fortunate than some of your readers; but by 'pushing' I managed to sell it to shops at 9d. per lb. I hope to increase my apiary in 1903 by three or four swarms, and trust it will be a year of success for all in the craft."

CORRESPONDENCE.

(*Continued from page* 474.)

RE-QUEENING FOR THE HEATHER.

[4961.] Your correspondent, "Heather Honey" (4941, page 453), questions the advisability of re-queening before the commencement of the heather honey flow, and states that he finds more honey stored in the supers when stocks are headed by queens of the previous year. "Heather Honey" has doubtless fallen into the common error of inserting a newly-mated queen in place of a worn-out old one, and expecting this new mother to produce, right away, combs crammed with brood. This is a frequent cause of failure, as no queen, however prolific, can successfully compete with the desire of the workers to cram the brood-frames with the heather honey. The most that any queen can do is to keep the brood nest in the condition it may be in when the heather flow commences. What Mr. Simmins advises is, that the young queens should be brought forward in nuclei from the beginning of July, and when preparing for the heather destroy the old queen and unite the two lots on the best combs, "frames crammed with hatching brood." The queen will then be able to hold her own, and the honey must go into the supers.

Most heather-men now work on this system, and it is the best as yet "invented," but I believe it can be greatly improved upon to give even better results at the heather, and at the same time go a long way towards keeping stocks in the "pink of condition," and equal to the present "best."

I should like very much to read the experiences of J. G. Hinckley (4944, page 455) with the celebrated queens he has got, and particularly the results from the United States raised Italians as compared with the "White Star" bees.

I prefer British bred foreign races myself, not altogether from patriotic motives, but because they are acclimatised and more likely to give good results in our climate than queens transported from more sunny lands.—J. M. E., *Ussie Valley, Conon Bridge, November* 22.

EXPERTS' CERTIFICATES.

[4962.] In the "editorial" of last week (page 461), under the heading "Thirdly," reference is made to conducting examinations for expert certificates by the B.B.K.A. Council. I shall be much obliged if you will inform me by means of a footnote to this letter, or perhaps some other member of the Council may be good enough to send a reply in your columns to the following questions:—1. Is there a special examination for a foul-brood certificate held by the B.B.K.A. Council? 2. If so, when and where is it held, and what entrance-fee is charged? 3. Does the present expert certificate granted by the B.B.K.A. cover this special foul-brood certificate or not?

My reasons for asking these questions are:—

Firstly, I have never seen anything stated officially about this foul-brood certificate.

Secondly, I noticed that a large appliance dealer advertises the fact that he holds a London certificate on foul brood. I wrote and asked him if this foul-brood certificate was the expert certificate of the B.B.K.A., receiving a reply that he was too busy at the time to go into the matter, and referred me to you.

Thirdly, I have seen it stated in the B.B.J., by one who was a frequent contributor to your columns, that he held a certificate in foul brood; and, fourthly, I see in your advertising columns last week an advertisement for a *B.B.K.A.* expert, with foul-brood certificate *indispensable*. From this it may be inferred that the B.B.K.A. expert certificate is not a sufficient guarantee as to foul-brood qualifications, which, in my opinion, will lower the value of the B.B.K.A. expert certificates considerably in the opinion of bee-keepers generally. What am I also to conclude from the fact that not a single question, in the late second-class examination for expert certificate, dealt specifically with the subject of foul brood?

If it is a fact that the B.B.K.A. certificate

does not apply to foul brood, then it is time this should be generally known; if it does apply, as I have always considered it to do, then this special foul-brood certificate is altogether unnecessary.

Allow me to sign myself—"2nd Class B.B.K.A. Expert, a Member of B.B.K.A., and a Supervisor at late 2nd Class Examination."—*Carmarthenshire, November* 24.

[There is no special examination beyond that which all candidates for third-class certificate now undergo before securing a "pass." This particular section of the examination paper has only been in use during the last few years, consequently those who obtained their certificates earlier are required to come up for the special section of the examination dealing with foul brood only. —EDS.]

CANDY-MAKING.

[4963.] Having often heard complaints about bee-candy, that the bees do not take it, or have a reluctance for it, I have for the last few years been trying to find out how to make the best quality of candy for feeding bees. I have made many experiments, and you may remember I sent some samples in March last for your opinion. Your favourable judgment encouraged me. First quality bee-food being, to my mind, so important in bee-keeping, especially during winter. I have twenty-two strong stocks of bees, and hope very soon to double their number, because it is to me most interesting, so intensely am I interested in the work of the busy bee! I have also made a special study of confectionery, and this enables me to prepare food which keeps them always healthy. I have already tried the effects on our bees of the medicated "honey-candy" of which I am sending you samples. The bees seem to be very fond of it. 1. But I would like to have your advice regarding it. 2. Will you also kindly tell me if soluble phenyle is better than naphthol beta for medicating bee-food, and how it should be used for candy-making? In making the candy of which samples are enclosed, I have followed the "Guide Book" recipe, with some additions of my own.—"R. F. PROCURATOR," *Buckfastleigh, Devon.*

[1. Candy is very good indeed. 2. We prefer N. beta for medicating bee-food.—EDS.]

A BEGINNER'S REPORT.

[4964.] As a recent subscriber to the BEE JOURNAL, and after reading interesting accounts of their doings from bee-keepers, I venture to send you my report as a beginner, if worth publishing, for the benefit of novices. My brother went to Canada last year, leaving six stocks of bees to be looked after by a bee-expert, who examined the hives on May 11, after the fruit-blossom was over. On May 29 a large swarm issued from one hive and decamped. In June two other swarms made off in the same way, one lot carrying away with them an Italian queen for which my brother gave 10s. the previous season, and so, as the expert did not come and see to the bees, I thought it time I did something myself. I first got the help of another man, and on opening up the hives we found them simply choke-full of honey. We took off a box of shallow-frames from the stock that had an Italian queen, and extracted 28 lb. of honey, besides what we consumed in the house. Since then I took a box of sealed combs from this same hive. From another I removed forty-two 1-lb. sections, and from a third I got a box of shallow-frames and a second box half full. This is the stock from which the first swarm decamped. Then from a "Wells" hive we got four racks of sections, more than sixty of which weighed over 1 lb. each, some being 18 oz. From another we only got two shallow-frames, the bees refusing to touch the foundation in the others. The sixth hive gave us three racks of sections.

I have not touched any of the brood-chambers, only taking honey above the zinc excluder. I packed the bees down for the season on August 8, as I wanted them to lay in a good store for the winter, as I could not attend to feed them because of living eight miles away. I looked at them, however, the first week in September, and could see that all brood-combs were sealed over on top as full as could be. In the "Wells" hive there is a glass window at the back, and through it the six outside combs appeared to be sealed down to the bottom. This is the best honey season we have ever experienced. I was in doubt about being able to sell the honey, but I have disposed of all the lot at from 9d. to 1s. per lb., except the last fifteen sections, which were sold at 7d. each. Even at this late time of year the bees of three of the hives are busy carrying in pollen. After extracting honey I returned the surplus combs for the bees to clean up before storing them away, but they started filling and sealing them up again instead, so I took the surplus chambers away, and at the end of September I burned the cappings of the sealed combs, and again gave them to the bees, and this time they cleaned them out beautifully. In concluding, I should like to say it seems certain that at times bees select a place where to go before swarming, because one swarm of ours made straight off to the chimney of a house near. There were cracks and crevices in the chimney, and passing through these the bees took possession. The people living in the house said it was the third swarm which came there this year, and as the bees entered the bedroom they could not sleep there on the night the bees came; so each time they had to light a fire and drive them out. Finally, they got a mason and filled up the crevices with mortar.—J. S., *Easton, Bristol, November* 15.

TEMPERATURE OF BROOD-CHAMBERS.

AMOUNT OF HONEY IN THE BROOD-NEST.

I notice that Dr. C. C. Miller is "at sea" as to the proportion of honey and brood-nest area in brood-chamber (in frames of comb) at different seasons and under varying circumstances. After some years of careful study and observation, I am convinced that the solution of the problem is almost entirely one of inside hive temperature. We know that in cold or cool weather the brood-nest is small compared with what it is in warm weather. We also know, or should know, that the brood centre must be held at all times at the same temperature, no matter what the outside temperature may be; and to observe their brood centre as the temperature goes up or down, whether advancing to the honey season or warm weather, or retiring after the honey season is over, is to prove the above statement to be correct.

It is clearly a matter of temperature when the queen decreases the circle of egg-laying, thus allowing the bees to fill a larger space under the top bar with honey; whether the temperature is lowered by cool weather or by swarming, and, as is often the case, by careless operators allowing the air to circulate through the hive, lowering the temperature below the point where the bees can counterbalance by the heat of their bodies. And I have also observed that this nest is decreased in size when work is begun in the supers, simply because the temperature has been lowered in the brood-chamber by a larger number of bees being transferred to work in the supers, it being necessary for a number of bees sufficient to gain and maintain a comb-building temperature at that point.

The prolific queen does not lay eggs nearer the top bar than an unprolific one, as such, but because she is likely to have reared a larger colony, which large colony is capable of heating a larger area of brood-nest than a smaller one. If you will transfer a prolific queen from her large colony to a small one she will circumscribe her nest area to fit the capacity of the small colony to heat up and care for brood; or, if you will put a poor or unprolific queen into a large colony, she will enlarge upon her former nest area, as her colony can maintain a brood-rearing temperature; and, as a proof of the statement here advanced, she will deposit more eggs, under favourable circumstances, than the better queen will under under unfavourable circumstances; and in either case the top bar will be approached or receded from as the temperature inside the hive is raised or lowered from any cause.

It is a matter of inside hive temperature when bees go into supers containing extracting-combs more readily than they go on to foundation in those frames, and more readily into empty frames with foundation than into sections with foundation. Where the combs are already drawn out, honey can be stored by a few bees at a temperature much below that required to build comb, thereby allowing a smaller colony to care for nest area, and send up a force to store honey in the super; but when it is necessary that comb should be drawn out, then this same colony must wait until the outside temperature raises the inside temperature, or until the bees have increased in number sufficient to send up a force large enough to maintain a comb-building temperature in this same super, and at the same time care for the hive below.

Bees dislike sections for the simple reason that it disturbs the temperature of the hive beyond the conditions in extracting frames to furnish enough bees to cover the wooden partitions (which are greatly in their way), in order to get together in sufficient cluster to produce and maintain comb-building heat; and in most instances, if not in all, a separate detachment of bees for each section is necessary before they can do much work in them; and, too, the weather must be warm before these little "squads" of bees can produce enough heat to build comb in the sections.

It is a matter of inside hive temperature when combs are not built down and fastened to the bottom bar. The bees cannot build down any further than they can produce and maintain a comb-building temperature. To prove this, hive two swarms of about the same size, and under nearly the same circumstances, and give one of them an all-round entrance at the bottom, and the other a one-end entrance, and note if the first mentioned will build down to the bottom bar, and if the other will not build down and fasten combs to the bottom bar. Why this difference?

It is impossible for the bees to produce and maintain in an all-round-entrance hive (with free circulation of air) sufficient heat to enable them to build comb down, and especially to *fasten* it, to the wooden bar. The temperature can be produced, and held in the other instance, and especially will the comb be filled out, and fastened at the closed end of the hive.

It is a matter of temperature when queens do or do not go up into supers to lay eggs. If the inside temperature of the super is high enough to hatch eggs and rear brood she will go up; otherwise she will not. Temperature is her first consideration. If the temperature necessary to rear brood were no higher than that to store honey or build comb, supers without brood would be the exception instead of the rule.

I am aware that bees can lower the temperature in their hives by their own exertions, and that this is often necessary in the largest colonies and in the hottest weather.

"The idea seems to prevail that there is an advantage in shallow top bars." I beg leave to suggest that there is an advantage in any thing that lessens the distance a cluster of bees must move (in concert) so as to be able

to produce the all-important temperature, so often mentioned in this article, that is necessary to build comb.

Deep top bars with air circulating over them, as when the super is on, cannot in many instances be brought up to a comb-building temperature, full length of the frame, to say nothing of brood-rearing near it, so the bees, in my observation, store honey down to the point where the queen stops laying, and she stops at the point where the temperature gets too low for her purpose.

One queen reigning supreme and alone in a hive is suggestive of but one nest or brood centre ; and to compel the bees to produce a second heat centre, and possible brood centre, is to suggest to them another queen ; and if you will exclude the reigning one, and give the bees the means, they will rear one for this centre or (to them) new hive. I feel sure they will rear just as good a one as the one below. And why they would not do so under normal conditions, and produce the best of queens, is more than I can comprehend, Mr. Alley to the contrary notwithstanding.

Bees will not hesitate to cross honey and wide top bars as such, but because of the difficulty they encounter in transferring a heat centre so great a distance.

I am fully convinced, both by experience and observation, that a close study of inside hive temperature will settle many of the questions now awaiting answers among bee-men ; and when this matter of temperature is well in hand the aim of the inventor along these lines will be to conform to the perfectly natural requirements of the bees rather than to the caprice of the operator ; and, further, I now predict that, when all is known that may be known of this inside hive temperature, and its bearing on bees and honey, the present hive will change its shape and proportions to that required by the bees.—J. M. GIBBS in *Gleanings* (American).

Queries and Replies.

[3004.] *Wiring Frames.*—I am enclosing a sample of the wire that I have used in wiring frames, and find that in a short time it turns black. I therefore ask—Will this be any detriment to the honey when extracted ? I have taken a small quantity of surplus honey from the wired combs, but it shows no discoloration. I will, however, be glad if you can tell me, through the B J., if the sample sent is the proper "tinned wire" advised for use, and if of the right strength.—H. C. M., *Collingham, November* 23.

REPLY.—The wire sent is untinned, and therefore not the proper material for wiring frames. It is well known that the acid in honey acts upon iron in such a way as to be more or less detrimental to the honey ; but, in your case, the fact of the wire being for the most part embedded in wax, would make the mischief almost inappreciable. When buying wire for the purpose of wiring frames, go to a reliable tradesman and ask for "No. 30 tinned wire," or, better still, get from a dealer in bee-appliances of good repute who will sell only the right article.

[3005.] *Cleaning Beeswax.*—I will be glad to have your opinion on enclosed sample of beeswax. It has been through the extractor, and after that twice melted, allowing it to boil while stirring well. I have a copy of the book on "Beeswax," but it does not assist me in getting it purified and made suitable for sale. Your help will therefore be appreciated. —T. M. B., *Atherstone, November* 24.

REPLY.—The sample is of fairly good quality, and quite suitable for sale purposes. If the "extractor" used is the "Gerster," illustrated on page 87 of "Guide Book," it needs only to allow the wax to run from the apparatus into a bowl of clean water without any subsequent boiling or stirring—as stated —in order to produce a cleaner sample than that sent. The latter, however, is a good commercial wax, though not clean enough for the show-bench.

PRESS CUTTINGS.

Mr. Cardell Williams, bee-expert and lecturer under the Cornwall County Council, has just discovered the queerest place for a swarm of bees that he has ever known. The bees got through a rivet hole in the tube of the mainstay of a large crane at work on Hayle Quay. Although the crane is in operation daily the bees are still undisturbed. —*Cornish Telegraph.*

A TREASURE SAVED BY HONEY.

The *Morning Leader* of October 22 is responsible for the following :—A Krugersdorp farmer upon the outbreak of war buried £1,500 in an ant-heap on his farm. In the course of events he took a holiday trip to Ceylon, "under persuasion." During his absence a swarm of bees built them a nest in this very ant-heap, all unconscious of its precious store. On the advent of the British troops some roaming Tommies were attracted by the busy bees, the product of whose industry offered an acceptable addition to their larder. They located the ant-heap, and removed the golden honey. The farmer returned from his little trip but a few weeks ago, and upon arrival on his farm bethought him of his buried bullion. Carefully taking his bearings, he approached the fateful ant-heap, and when within 100 yards or so observed, with a keenness of sight heightened by eager anticipation, that a radical disturbance had occurred. His jaw and heart dropped in unison. Half-dazed, and with but a vague notion of what he was doing, he proceeded to

remove the little débris left, when, lo and behold! within 1 in. or 2 in. of the surface he discovered the treasure he had given up for lost.

T'HONEY SEASON.

It's a varry lang tahm sen t' honey season wur knawn ta be sa bad. I've talked tiv a few apists durin' t' last few days, an' wi one consent they've tell'd me 'at they've nivver knawn sike a bad season. Mr. John Mould, o' Danby, one o' t' biggest bee-farmers i' t' North, says 'at monny swarms have deed an' them 'at haven't a'e eaten all ther honey nearly. Yan or twee hives here an' there have deean middlin' but the're t' exception. Ah leyke honey i' t' cap best mesen, but there's varry few hev it in t' aud feshioned way noo-a-days. Ah knaw ya spot where honey's making 1s. 3d. a poond reglar. But t' hevvy rains at t' start o' this "summer" meead honey varry wattery and them 'at put a bit i' t' stocking wi' what tha gat wi' t' sale o' honey will be sairly disappointed this back end.—*Malton Gazette* (*Yorks*).

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** A correspondent, who signs himself "A Visitor to the Dairy Show," writes commenting on the letter of Mr. H. W. Seymour (4951, page 464). We do not, however, see that any useful purpose can be served by the publication of anonymous communications of this kind, which deal mainly with casual remarks made by persons whose names are not given. What "a lady" said to "Mr. A." at a "certain show" has no particular interest for general readers, and would probably only lead to retort from some other person "name not for publication." Our correspondent must remember that there are two sides to every question, and persons who attempt to criticise should not only do so under their own name, but in fairness be prepared to substantiate their statements by reliable evidence.—EDS.

T. F. (Ilkley).—*Transferring Bees from Skeps to Frame-Hives.*—1. You had better get the skep of bees to your own place—half a mile away—by tying over its mouth a square of coarse cheese-cloth, and carrying it carefully at night bottom upwards. Defer transferring to frame-hive till next spring, when it may be done as proposed by setting the skep on top-bars and allowing the bees to transfer themselves. 2. All feeding up for winter should be done before cold weather sets in. Bees will frequently refuse syrup-food at this cold season, and must have soft candy instead. 3. Do not trouble to re-queen your hives till you see how they get on in brood-rearing next spring. The bees may have re-queened themselves, and have young ones at the present time. Age of stocks is not a safe criterion of age of queens.

L. B. W. (Hereford).—*Perforated Cappings in Foul Brood.*—1. We do not think it possible to define the "exact cause" more clearly than to say the cells in which the diseased larvæ die are sometimes never completely sealed over by the bees at all, and at others the cappings are perforated by the bees for some reason beyond our present knowledge. 2. The publication mentioned could probably be obtained through the A. I. Root Co., Medina, Ohio, U.S.A.

R. C. O. (Barnet).—*Pure Cane* versus *Beet Sugar.*—We cannot take upon ourselves to state authoritatively whether the sugar you name is "pure cane or not." Nothing short of a chemical analysis would prove that. If your local grocer tells you, as stated, that "there is not a bit of cane sugar" in any of the sugars referred to, you must set whatever value you please on his opinion. On the other hand, the press-cutting enclosed in your letter, showing that a fine of £10, or a month's imprisonment, was imposed on a London grocer for selling "beet sugar dyed yellow" as Demerara sugar, is clear proof that the offence is punishable by law.

C. R. W. (Greenwich).—*Making Soft Bee Candy.*—Your sample, though in some respects good, has not been quite sufficiently boiled. It is fairly soft now while freshly made, but would probably become too hard for bee food in a week or two. It is also rather coarse in grain, and has not the smooth or "buttery" consistency of first-class bee-candy.

A. AYLWARD (Birmingham).—*Measurements for Making the "B.B.C." Hive.*—1. See reply to "Rocks" in last week's B.B.J., page 470. *Candy for Winter Food.*—2. If your stocks had no natural stores on hand when fed up, 10 lb. of sugar made into syrup is not enough to carry them safely through the long winter with which we are threatened; the supply should therefore be supplemented by a good-sized cake of soft candy placed beneath the quilts and warmly packed around to prevent cold draught through brood-nest.

A. L. G. (Ashton-on-Mersey).—*Candy-making.*—See reply to "C. R. W." on this page.

Honey Samples.

W. C. W. (Sydenham).—Sample is rapidly granulating, and has neither sufficient flavour nor aroma to enable us to define its source. The colour would probably be termed "medium" if sample was warmed sufficiently to clarify it by melting the granules.

E. B. C. (Caterham).—The heather sample (No. 1) is of good flavour and aroma, but is granulating and shows signs of fermentation. No 2 has also begun to granulate; the flavour is fairly good, but it has a very objectionable aroma.

Editorial, Notices, &c.

THE LAW COURTS.

KING'S BENCH DIVISION.

(Before Mr. Justice LAWRANCE and a Special Jury.)

COLTMAN *v.* COWAN, CARR, AND LEE & SON.

ACTION FOR LIBEL AGAINST THE "BRITISH BEE JOURNAL."

This action was heard on Thursday and Friday, November 28 and 29, 1902, before Mr. Justice Lawrance and a special jury, and resulted in a verdict for the defendants.

In view of our limited space, we cannot well print a full report of the trial, but as the case is of some importance to the bee industry in general, we purpose next week to print in full the "Statement of Claim" and the "Defence," and such particulars as may be needful, together with a shorthand note of the summing up of the learned Judge.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Communications relating to the literary department, reports of Associations, Shows, Meetings, Echoes, Queries, Books for Review, &c., must be addressed only to "The EDITORS of the 'British Bee Journal,' 17, *King William-street, Strand, London, W.C.*" *All business communications relating to advertisements, &c., must be addressed to* "THE MANAGER, 'British Bee Journal' *Office*, 17, *King William-street, Strand, London, W.C.*"

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4965.] The "Standard Frame" is again under discussion, and Mr. Edwards (on page 463) deals with the subject somewhat fully. For myself, I only referred to the subject in my closing "Note" on same page, and wish now to further assert that the gross of frames Messrs. Abbott made for me in '93 or '94 (at a small extra charge beyond their usual price) have convinced me that a wider top-bar than the "Standard" is an advance, because of the greater uniformity of the thickness of combs built in same, compared with those built in the B.B.K.A. "Standard" frame—also the comparatively small amount of propolis used by the bees, and the almost total absence of brood-combs. When I remarked some time ago that bee-keeping had advanced very little during the last ten or fifteen years our Editors, apparently, did not fall in with my view—yet here we have a demonstrative fact that we are at a standstill as regards frames. During the years that have passed since the B.B.K.A. adopted the "Standard" frame many letters have appeared in the B.J. advocating alterations in the size, but they have always been outvoted, and we have stood by the "Standard"; but now, in the matter of width and thickness of top and bottom bars, the advocates of a change in these points in no wise challenge the "Standard's" *outside* size. For myself, I advise bee-keepers to make or procure a dozen or two of "Standard" size frames, with top bar $1\frac{1}{16}$ in. to $1\frac{1}{8}$ in. wide and $\frac{9}{16}$ in. thick, and with Abbott's twin groove for fixing the foundation, and I feel sure that those who do so will, after trial, be enthusiasts in favour of a change. It will ensure strength and rigidness to the brood-frames, avoid "sagging" in centre of brood-nest, thus allowing a space for honey cells below sections—which makes the removal of the super a diffioult matter—and no excluder will be required under section racks worked over these frames.

Shows, &c.—Mr. H. W. Seymour, in his reply to my "Note" (on page 464), says the mead and vinegar exhibited by himself "was made in 1901." I, for one, do not doubt his word, but I still stand by my assertion that a good sample of wax, as also a few bottles of vinegar and mead, are not perishable articles, and that age imparts (to the latter at least), if really good, a commercial value, as in port wine. Do judges taste mead and vinegar? As regards the ancient specimen of honey-comb design I referred to, certainly that was Mr. Seymour's and it must have been worked in last century, if not earlier. Others exhibited mead and vinegar besides my friend Mr. S., so that my reference was general. The wax in "commercial cakes" is not, in my opinion, likely to be adopted as the channel by which the bee-keeper will dispose of his yearly output. I contend that modern bee-keepers are consumers of wax rather than producers. Those who live in heather districts and have to crush their combs have a larger quantity than have those living in flower-honey districts, who extract and save their combs for future use, having only the cappings and a few old combs to melt up; and if they are careful, trying to make their bee-keeping profitable, these cakes are sent to be made up into foundation. Indeed, I know from practical experience that the comb-honey producer requires every year to purchase wax in the shape of comb-foundation, much more than is produced, even where every particle is

taken care of and rendered into wax. The parcel of wax Mr. Berry mentions on page 474 as sold by him to a firm was, I opine, sold to a foundation maker, if the bulk was of his usual fine quality. With regard to Mr. Seymour's mention of F. W. Woodley, the wax shown by this exhibitor was the ordinary wax-cakes such as he and other grocers sell to customers the year through. It was not quite so bright in colour as his previous consignment from the wholesale house in London. Evidently we bee-keepers cannot teach the wax-cake makers anything new. I am sorry if Mr. Berry feels hurt by anything I have said *re* the same cakes of wax being trotted out to show after show. I may tell him that the "current comment" is that such things are not only possible, but are really done. Then, as regards his retort about sections of honey, I reply, yes; these also go to more than one show very often, and again, when they return from the first show they are often unshowable again. Some kind "packer" will persist in placing them upside down or sideways, or the railway company will give them some slight "jars" and crack the capping. All these things start "weeping" and the sections are spoiled for the show bench. Not so the wax in a cake; for even if chipped it can be remelted. I never heard of Mr. Berry's loss of wax; indeed, I was not at the last show at Reading, so do not know if it was staged.

I endorse what Mr. Seymour says in his last par, *re* live bees and trophies. I do hope that these will be barred from future shows, and also that show committees, in drawing up their next year's schedules, will not only put a stop to this inhuman practice of confining poor bees nine or ten days, but will also bar other items which have crept into the "Trophy Class," such as cosmetics, soaps, hair-restorers, and suchlike things. No *English honey* has ever, in my opinion, been used in the manufacture of any of these articles. Then why should we, as bee-keepers, countenance them? Flowers, as adornments, are also of questionable utility. Time was when the flowers were honey or pollen-bearing plants, and when no mention was made as "suitable for a grocer's window." Now we try to outdo each other with these table decorations. The gentleman gardener is approached, and some of his finest floral specimens are used, flowers from which the busy bee never gets a sip of honey or a grain of pollen. Then the other side is that but little water is put in the flower vases, or the water finds its way over the sides and spoils the sections, or is dried up, and before the show is over they are in a semi-dried state, and the visitor is inclined to write "Ichabod" on the whole affair. For these reasons I appeal to the show committees to sweep the flower decorations away—let the trophy consist of edibles only.—W. WOODLEY, *Beedon, Newbury.*

THE CONFERENCE OF BEE-KEEPERS.

SOME GENERAL "NOTES" THEREON.

[4966.] I have been much interested in your report of the conference of county representatives, and feel sure good will come of it, especially if it can be made an annual affair. May I also be permitted to endorse all that is said in the editorial of November 20 as to the advantages of affiliation with the B.B.K.A., which applies with equal force as a reason for every bee-keeper joining his county association. I think that all readers of the BEE JOURNAL or its monthly, the *Record*, who are not already members of any bee-keepers' association should join one in the coming year. All bee-keepers reap benefit from the labour of those who are associated together for mutual help, and I think the least they can do is to show a little gratitude, and render help, be it ever so little—not keep aloof, and then grumble at having to pay an extra 6d. for insurance as non-members. Bee-keepers and their associations should adopt the motto "Union is strength," bearing in mind also that greater numbers means greater strength. The "thirdly" and "fourthly" of your editorial (page 461) should be taken to heart by every bee-keeper. The good to the craft, which has been accomplished, cannot be over-estimated. It has, indeed, "revolutionised bee-keeping in this country." Speaking for myself, I think it would be a bad day for British bee-keepers if the B.B.K.A. should, by any mischance, cease to exist. There is useful and important work before it, work that can only be accomplished by securing the cordial co-operation of the county associations and bee-keepers generally. Along with other things, I hope some day to see some practical scheme formulated for regulating the price of honey, so that it may have some kind of "market value," and supply and demand be better adjusted. Then there is the ever-recurring theme of some kind of legislation respecting foul brood. I have often, when doing "expert work," wished that some power or authority was available to enable one to deal with this pest, but at present one can only give advice and trust that it is followed. Compulsory powers might not prove an unmixed blessing, but there are people, generally non-members of associations, and who never see a bee paper on whom moral suasion has no effect, and my experience goes to prove that the only way of dealing with them is by the force of law.

While on the subject of foul brood, I would like to suggest that all Associations should furnish their experts with a form of notice of foul brood, and copies of the Board of Agriculture leaflet on the subject, as was done in Devon last spring. I do not know whether the Devon Association's printed "form" is copyright or not, but if so, no doubt they would allow others to use it, or the "form" might be printed in the B.B.J. These forms

give advice in a nutshell, as regarding the best treatment of stocks affected, and nothing could be clearer, or, better, to give to a bee-keeper, whose stocks were diseased, than one of these forms and a leaflet. They are at hand to refer to, consequently there is no danger of forgetting what the expert said. The only improvement I can suggest is, that the three stages of the disease should be numbered on the card, so that the expert could mark hives to correspond. I would also suggest a change in respect to the experts' report books. These at present vary much in different counties. In some the report is simply left with the bee-keeper; others send it to the Association secretary. In some forms no space is left save for the barest facts and figures. There should be ample room for any remarks or advice given, and if a counterfoil was attached one could be left with the bee-keeper for reference and the other sent to the Association. Thus the expert could have the particulars on his next visit, and this would be a great help to him in giving advice, especially if it was not the same expert.

Having done expert work in several counties, I have naturally been interested in several recent letters in B.B.J. referring to experts spreading foul brood. If an expert takes proper precautions in disinfecting his clothing and his appliances after examining diseased stocks it is very unlikely he will carry infection. Personally, I have for several years used perchloride of mercury as a disinfectant for hands, and smoker, &c., when on tour. Many times have bee-keepers expressed surprise at the extreme precaution taken, not having the least idea that foul brood was so infectious. If an expert is experienced and careful there is no fear of his carrying the infection in his clothes. It requires actual contact in order to communicate the disease, and there would be no excuse for any one disregarding this rule. The safest way is to work with coat off and shirt sleeves rolled up.

Your correspondent "Herbs" (4,922, page 42,) should not, I think, be too ready to cast blame on the expert. In the first place, it was a month after the latter's visit that foul brood was found only in the incipient stage. Had the bees contracted the disease from the expert, it would assuredly have appeared earlier. Foul brood being admittedly general in the county, there are probably colonies of bees nearer to "Herb's" apiary than he is aware; may be in a tree, chimney, or house roof, which his bees have robbed, and my experience this season has been that they would rob, if there was the slightest chance even of plunder. I also gather that no preventive was used until after the outbreak of disease. Surely this was a mistake? for no matter how isolated a bee-keeper may deem his apiary, "Prevention is better than cure."

I cannot agree with your esteemed correspondent "D. M. M., Banff," when he, on page 434, ridicules the idea of a "bogie man" working a miracle! I wonder if he has ever tackled bees which had worked themselves up into a blind fury. He says, "they strike fierce and fast at your trousers or sleeves when you move a limb . . ." My experience is a bee never stings such an object voluntarily. I can assure "D. M. M." I have often known them do this. Once or twice I have had scores of them dotted about all over my clothes, stinging for all they were worth, though not reaching the flesh; at the same time the palpi must have telegraphed to the brain that the substance pierced had no feeling.

With regard to a "new frame," I am quite at one with Mr. Edwards respecting strength of top bar and dislike of saw cut (4,950, page 463). I make up my own frames, and they are solid. It is as little trouble to me to fix foundation (which I always wire) by running melted wax in each angle as it would be getting it in the saw-cut. May not one reason why so few use these frames be the difficulty of obtaining them? Many bee-keepers, especially beginners, simply take whatever frame is on the market, without studying the *pros* and *cons*. Not only do the cut bars sag, and sometimes break, but often the two halves are nailed together after foundation is inserted, with tops uneven, leaving a space under quilts, to be propolised up or filled with dirt. The solid bar is stronger even if only ⅞in. thick, cleaner and neater. Mr. Taylor (4,958, page 473) I think goes beside the mark. I do not see that Mr. Edwards alters the *size* of frame, but the *strength* of it; and if a stronger top-bar is used, it can be cut down at ends, as he suggests, to take the ordinary tin end, and if this is done from the under side, and outside measurements of frame kept to "Standard" size, interchangeability will not be damaged in any way.—J. HERROD, *Trentside Apiary, Sutton-on-Trent, Newark.*

MARKETING HONEY.

[4967.] Supplementary to my letter in B.J. of October 30 (page 439), and also in reply to Mr. Homersham (page 456), on "Selling Honey," wherein he seems to doubt the possibilities of disposing of 700 lb. in a year, retail at 1s. per lb., I wish to say that my calculation is based on what I have sold myself, and also upon what other contributors to our pages tell us they have done. I have never had so much as 700 lb. for sale in a season, but I am working my apiary (which I have just removed to a more sheltered spot) for increase, so that I may get the 700 lb. in due time. At present I am wintering five stocks. My progress has been slow, owing to nearness of main road to my hives. This is now altered since removing them, and I have every confidence in being able to achieve greater results in the future. I find

in looking over back numbers of *Record*, that Mr. L. Wren, in describing his apiary (page 149, October, 1898), says:—"I run about twenty hives for honey production, and retail annually about 1,000 lb. without soliciting a single customer." I hope the readers of the B.B.J. will note this, and that Mr. Homersham will be duly rewarded by having his doubts removed by pushing his "front door trade."

Sections versus *Screw-Cap Jars.*—No doubt the former look much better than the latter when glazed and laced up to perfection in Mr. Woodley's best style, but much of this is only outward show stuck on to please the eye, and which only serves (in many instances) to blind the purchaser by leading him to believe he is buying a superior honey and full weight, hence the need, as we have so often been told through the pages of the B.B.J., to grade your honey, which simply means to sort out the sections which weigh 16 oz. and look the best, and so on with others of a lighter weight, but which weigh approximately about the same one with another. Compare this with good honey in 16 oz. screw-cap jars and my money for the same number by the dozen would be better laid out on the latter than the former so far as weight of honey is concerned. The quality, if run from supers or shallow frames filled above the brood-nest, as all sections usually are, would be equal in every respect. Yet, doubtless in many instances, the one which pleased the eye the most would over the retail counter fetch the top price. I do not think that any bee-master who works his apiary for sections would, in grading the same, uncap one for the sake of ascertaining the quality of the honey, while much can be judged from the colour as viewed through the bottle. What say our friends?—W. W. K., *St. Brelade's, Jersey, November* 24.

AN ECHO FROM HANTS.

[4968.] *The Past Season.*—The weather conditions down this way have been much the same as in most counties during the honey-flow. All the surplus we got was stored within the three weeks of fine weather, which broke up just as the limes were coming into blossom, so, of course, there was no honey from that source this year. My "take" for 1902 from three hives has been No. 1, fifty sections; No. 2, thirty-four sections; No. 3, 43 lb. extracted—an average of 42 lb. per hive. I had only three colonies to start with, but have made up nine stocks for winter, with driven lots, and hope for a larger harvest next year. A friend and I took a few hives to the heather (about five miles away), but got scarcely any honey from that source. I do not think we had more than three really fine days during the time the heather was in bloom.

The Size of Frame Question.—Ably set forth by Mr. Edwards in B.B.J. of November 20, is, I think, an important one, as the top-bar of the present "Standard" frame "sags" with the weight of honey during a good season. I have lately come across a frame with the top-bar $\frac{1}{2}$ in. in thickness, with projecting ends $\frac{3}{8}$ in., so as to accommodate the ordinary metal end—a step in the right direction. Then the question of brace-combs comes up. Of course, with the excluder on this does not happen, and I agree with Mr. Edwards, that if a top-bar can be made so as to do away with, as far as possible, the excluder, so much the better. I think the frame he refers to, with the bottom-bar same width as the sides, ought to become a general favourite, especially if it answers so well as stated.

Experts and Foul Brood.—Some few years ago when I kept bees in another county, and in a spot where foul brood was very much in evidence, the expert of that county paid me a visit. Being well aware of the nature of that dread disease, and of the precautions needed, I took a bowl of disinfectant with us when examining the bees, but although I called the expert's attention to the bowl he paid not the slightest heed, and went on from hive to hive, myself and the bowl in his wake. Needless to say, I lost confidence in that man entirely, and I do not wonder at the objection of others to the visits of careless experts. I omit both name of county and expert, not being wishful to rake up the mud after so long a lapse of time.

Competing Appliance Makers.—I really do not see what real objection there is to these gentlemen keeping bees, producing honey and wax, and competing in the ordinary way with any one else. The complainants all seem to agree that these manufacturers are honest in staging their own honey, &c. That being so I think it a little narrowminded to threaten a boycott to these "grasping?" manufacturers. Their bees are no better than those of other bee-keepers, neither can they gather superior honey. True, they may be in a good district, but surely they are not alone? At any rate, it will make no difference to me who exhibits, or who makes appliances, if I can get what I want at any manufacturers, I get it.

I might mention I am not a "grasper" but intend competing with any who like to come. —D. H. F., *Hants, November* 26.

WANTED, A FRAME.

[4969.] I, for one, agree with your correspondent, Mr. H. Edwards (4950, page 433), in his condemnation of the "Standard" frame. Its faults—especially when they are aggravated by the saw cut in the top-bar—are too evident to be overlooked. For the purpose of foundation fixing, the "Abbott" groove-and-wedge frame is a great improvement, and, in the hands of an experienced person, the danger of the foundation slipping out is very small. I say in the hands of an "experienced person," for a neighbouring bee-keeper, to whom I supplied frames of this pattern a few months

ago, and who had not previously tried them found them anything but satisfactory. He had inserted six frames alternately with combs already in the hive (a serious mistake, this, in the end of the summer), and when we examined the hive a week or two later all six sheets of foundation were found dropped out of the groove. Since the inexperienced form so large a proportion of our number it would appear that some other method of fixing foundation must be sought. Without having tried the plan advocated by Mr. Edwards one cannot speak with full confidence of its merits, but I am inclined to think that the thick top bar, with ⅛ in. groove on the underside, will prove in practice to be better than the groove-and-wedge method, even when the latter has the advantage of being associated with a top bar ⅝ in. thick, as is the case with the frame that I use—made in America, I believe.

Mr. Edwards proposes, "in order not to interfere with the metal ends in universal use," to reduce the ends of his new frame to ⅞ in. by ⅜ in. Why not adopt a wide-shouldered end that would work with the metal end, and gradually supplant that abomination? The "W.B.C." end is, no doubt, a very ingenious invention, but how many bee-keepers use it for the purpose for which it was introduced? How many practise closing up of combs to prevent drone breeding? Very few, I imagine. The thin, narrow top-bar, and the metal end might, in my opinion, advantageously be allowed to disappear together. Of the advantage of putting more wood into the side and bottom-bars, I am not so convinced. With a satisfactory method of hanging the foundation, there would be very little need of wiring the frame, and, except for wiring purposes, the side and bottom are very well as they are.—JOHN MORGAN, *Upper Boat, Pontypridd.*

COUNTY EXPERTS AND FOUL BROOD.

USE OF CRUDE CARBOLIC ACID.

[4970.] Referring to the letter headed "Notes from the Lake District," page 453, and the use of carbolic acid for foul brood, as your correspondent, "Heather Honey," does not give his name or locality, and mentions more than one expert, the point he raises is somewhat vague to deal with, as Mr. Luke Collinge's reply on page 465 shows.

Our Association has only employed one expert, who has, so far, travelled over not more than half the county, and the probabilities are that "Heather Honey" does not refer to him.

The method our expert works on, whenever possible, is to prepare a clean hive with frames fitted with full sheets of foundation. He shakes off the bees from their infected combs and lets them run into the prepared hive; burns all combs and quilts, burying the ashes, and feeds at once, medicated, if possible, with naphthaline on floorboards. Should any odd cell of "F.B." be found to recur after this treatment, then he drops crude carbolic into it; and as he never does this to more than twelve cells, the bees do not mind it. The result has been satisfactory.

The crude carbolic burns up the foul-brood germs, and *is avoided by the bees* until *it has evaporated*, when the cells can be safely used by them.

He handles the carbolic with a small medicine dropper, so that it only goes where it is needed, as a careless way of applying it would, of course, end in failure.

If "Heather Honey" will send me his address, I shall be only too pleased to give him the fullest particulars.—G. M. SAUNDERS, Hon. Sec., Cumberland B.K.A., *Keswick.*

ANOTHER "BEE EXPERIENCE."

[4971.] Reading the remarks of your correspondent, C. Morris, on page 465, headed "A Bee Experience," brings to mind an occurrence that befel me whilst on the moors last September. Hearing a friend talking to a lady at the foot of the hill whilst we had a roam amongst the heather, he informed her that I was a beekeeper, and on hearing this she asked me, when we got back, if I would examine a stock which she had bought from a friend of hers.

As I had neither veil or any tackle with me, I did not feel much inclined, but she being anxious to know how the bees were, I said I would have a look. The hive was situated at the foot of the hill, so the bees, when going out or returning home, had a steep rise and fall. The entrance was guarded by an abundance of tall growing weeds, including thistles and nettles—life size.

The day was grand, one of the few which we have had this year, when the heather was giving forth its sweets. I lit my pipe, and commenced to take off the roof, but found it securely fastened down by four strong nails. "Had the lady a pair of pincers or a strong screw-driver?" I inquired. "Yes, she had a screw-driver" (about as thick as a pencil). After a long time, by the aid of my jack-knife, a good deal of twisting and pulling, I managed to get the roof off. And what a picture of comfort and prosperity I disclosed! Earwigs in profusion, woodlice galore; moths, spiders, and other creepy things seemed to be revelling and having "high jinks" here. After scattering this happy family, I found the queen-excluder on top of a shallow-frame super, containing some "good old" dirty combs of various shapes; and under this super was a piece of rotten baize cloth, stuck firmly to the frame tops. After scattering more "wigs," little tortoises, &c., a bee came through a hole to wish me the compliments

of the day! The bees were strong, had plenty of stores and—dirt! I offered to transfer them to another hive, and, after cleaning out the cobwebs in it, I went to the stock, moved it to one side, placed the "cleaned-out" hive on the stand, and commenced to transfer the combs and bees. What a job! The lugs of the frames were all sizes, and the combs had to be spaced as best they could. You can guess the state of the temper of the bees after so much jostling and exposure. One bee went for my nose, another for my throat, others for my neck and hands; but the climax came when I felt one wending its way into my ear! I do not know whether it was in search of wax, or mistook it for a 'This way in!' I kept cool, knowing there was no through admittance, and did not attempt to guide it backwards by mild persuasion, or forcibly eject it. I knew I should chance a 'fat head.' Anyway, after looking round, and finding no nectar there—I cannot say about wax—it elbowed its way out again, much to my satisfaction. The experience was far from pleasant, and, like your correspondent, I felt the noise for some days."—W. R. WEST.

EXHIBITION AT NEWCASTLE-ON-TYNE.

HONEY SECTION OF THE SHOW.

An exhibition connected with the grocery trades was held in St. George's Drill Hall, Newcastle, Nov. 5 to 19. Amongst the many competitions British honey was included, and, taking the poor season into consideration, there was a fair display of honey, wax, and bee appliances.

Messrs. Kidd and Weighell acted as judges, and made the following awards:—

Twelve 1-lb. Jars Extracted Honey.—1st, E. C. R. White, Newton Toney, near Salisbury; 2nd, T. S. Holdsworth, Kirton-in-Lindsey, Lines.; 3rd, E. C. R. White.

Twelve 1-lb. Jars Heather Honey.—1st, John Thompson, Langleeford; 2nd, Wm. Thompson, Broadstruther; 3rd, R. Trotter, Akeld Station.

Twelve 1-lb. Sections.—1st, L. McNeil Stewart, Claremont-terrace, Swanley, Kent (only award).

Twelve 1-lb. Sections Heather Honey.—1st, Wm. Thompson (only award).

Most Suitable Outfit for a Beginner (price not to exceed £1 10s)—1st, R. H. Coltman, 49, Station-street, Burton-on-Trent; 2nd, Caldcleugh Bros., Silver-street, Durham; 3rd, W. J. Watson, Limited, Town Hall Buildings, Newcastle-on-Tyne.

Beeswax in Cakes, Quality of Wax, Form of Cakes and Suitability of Package to be Adapted for the Retail Counter.—1st, J. Pearman, Pennylong Lane, Derby; 2nd, John Berry, Llanrwst, N. Wales; 3rd, E. C. R. White; v.h.c., Wm. Hood, Dalry, Ayrshire; and J. L. Dent, Burnhill, Darlington.—JAS. WADDELL, *Wooler*, for MR. W. A. COWIE, Manager.

THE DENVER CONVENTION.

At the Annual Convention of the National Bee-keepers' Association of America, on September 2, 3, 4, and 5, 1902, the President (Mr. W. Z. Hutchinson) delivered the following address on

THE FUTURE OF BEE-KEEPING.

Fellow Beekeepers,—Has there ever crossed your mind the thought that modern bee-culture has advanced by distinct stages? When Father Langstroth's invention laid bare the secrets of the hive, allowing man to turn one more page in the book of Nature, then began what might be called the mechanical stage. In this were brought forth hives, smokers, sections, comb foundation, and the honey-extractor. Minor mechanical improvements, like the bee escape, the queen and drone trap, the solar wax extractor, the wax press, perhaps an uncapping machine, may be occasionally added to our list of implements, but the fundamental mechanical improvements were made long years ago.

Next came the methodical stage, when, with the aid of mechanical inventions, were developed methods and systems of management. Bee-keepers learned to control increase, to rear, ship, and introduce queens; to secure the largest amount of the best honey in the most marketable shape; learned the numerous operations that come under the head of manipulation. Some of our present methods will certainly be improved upon, but it is doubtful if future bee-keepers will secure their crops with much less labour than we now bestow upon ours. Our hives, implements, and methods leave little room for improvement.

In another respect bee-keeping is not now what it was years ago. The invention of improved hives and implements, allowing the adoption of more profitable methods, but calling for greater skill, has gradually led bee-keeping from mixed husbandry to that of speciality. Of course there are, and probably always will be, people whose tastes impel them to keep a few bees, but the great mass of people have found it more profitable to buy their honey, the same as they have learned that it does not pay them to make their own cheese.

Bee-keeping has become a distinct branch of agriculture, and is largely in the hands of specialists. These specialists have implements and methods that answer well their purpose, and the natural question is, "What next?" What will be the next stage? What will be the future of bee-keeping?

The answer is not far to seek. The history

of kindred industries will be the history of bee-keeping. First came discovery, invention, and development; next came speciality, and now comes *organisation and co-operation.*

Most emphatically is this an age of organisation. An industry without organisation is practically helpless—at the mercy of all other organisations. Organisation saved the citrus fruit industry of California. But we need not go that far for an illustration. Right here, in this good State of Colorado, with its fields watered from the eternal hills and robed in the royal purple of alfalfa, bee-keeping would have languished and been robbed of its commercial charm, had not organisation come to the rescue.

Organisation has already done much for bee-keeping. It has fostered a fraternal spirit, helped to scatter apicultural wisdom from ocean to ocean, protected its members from unjust persecution and secured favourable legislation. But the dear old Association, of which we are all so proud, is even now but the nucleus of what it is destined eventually to become.

Perhaps the next great work of this organisation will be the timely gathering of statistics regarding the prospective harvest and the reporting of the supply and demand in different localities, thus preventing glutted markets and unprofitable sales. From this the good work will go on until, if the Association does not actually control the bulk of the sales, it will be a potent factor in the regulation of prices.

Honey may never be higher in price than it is now, but it will be produced at less cost. The continued development of specialty and of organisation will lessen the cost of production. The number of bees will be increased, but not the number of bee-*keepers*. They will "keep more bees." Few bee-keepers will be content with simply the home apiary. There will be an out-apiary for each day in the week. With this style of bee-keeping organisation will be an easy matter.

Commercial bee-keeping of the future will be in the hands of specialists. In the hands of men who have carefully selected and thoroughly understand their respective localities. Of men who keep enough bees to employ fully their hands, their brains, and their capital. And among these men there will be complete organisation and co-operation.

As a foundation for the more perfect organisation of the future, let us cherish and foster the dear old Association of which we are now members. Let us pay our dues promptly. Let us encourage others to join. Let us lay aside self and selfishness. And of the talents that we possess let us give that which will the most quickly and surely help to build up, to strengthen, and to broaden its scope. Let us rest not until every bee-keeper, from ocean to ocean, has rallied under its banner, and all can co-operate as the members of one great family.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

October, 1902.

Rainfall, 2.32 in.
Heaviest fall, .55 in., on 15th.
Rain fell on 18 days.
Below aver., 1·45 in.
Maximum Temperature, 63°, on 10th.
Minimum Temperature, 28°, on 23rd.
Minimum on Grass, 20°, on 23rd.
Frosty Nights, 1.
Sunshine, 89·4 hours.
Brightest Day, 21st, 8·6 hours.
Sunless Days, 7.
Below average, 39·5 hours.
Mean Maximum, 55·5°.
Mean Minimum, 43°.
Mean Temperature, 49·2°.
Above average, 1·6°.
Maximum Barometer, 30·72°, on 24th.
Minimum Barometer, 29·52°, on 10th.

L. B. BIRKETT.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

November, 1902.

Rainfall, 3 34 in.
Heaviest fall, ·50, on 11th.
Rain fell on 17 days.
Below average, ·04 in.
Maximum temperature, 58° on 6th.
Minimum temperature, 28° on 18th.
Minimum on grass, 23°, on 18th.
Frosty nights, 5.
Sunshine, 56·1 hours.
Brightest day, 4th, 5·8 hours.
Sunless days, 11.
Below average, 16·1 hours.
Mean maximum, 49·5°.
Mean minimum, 38 3°.
Mean temperature, 43·9°.
Above average, 1·7°.
Maximum barometer, 30 36° on 2nd.
Minimum barometer, 29·20° on 25th.

L. B. BIRKETT.

THE WORKING POWERS OF BEES.

THE LONG-TONGUE THEORY.

Since our experimenting apiarists and scientific men agree it is neither tongue-reach nor tongue-length that enables the red clover honey gatherers to obtain the lucid nectar from the deep tubes beneath the corolla of the red clover, would it not be well for them to turn their searchlights in other directions, and if possible discover the true secret, even if it does not exactly tally with old ideas?

For many years we have been extolling the wisdom of the honey-bee. In the "A B C of Bee Culture" Mr. T. W. Cowan is quoted as showing the brain of the honey-bee to be superior to all other insects. One can hardly find a book written on the apiary which has not something to say of the wonderful knowledge possessed by the honey-bee. Have we not good evidence at hand to prove that they

are not all endowed with the same amount of wisdom and skill any more than the human family is? For instance, we see a vast difference in their skill and workmanship in comb-building, in their manner of constructing queen, drone, and even worker cells. I could relate many instances showing the cunning of the honey-bee if I had the time and space. These things I have observed in my own apiary, and I doubt not that all old bee-keepers can say the same. This being true, why should we not credit the honey-bee with at least a small amount of progressive knowledge which is being handed down little by little from generation to generation, and not say it is simply instinct, and that the first honey-bee on earth (which perhaps had a nest in a hollow tree in the Garden of Eden) knew as much as our best strains of the present day? I think it would be but fair to give them the advantage of a doubt, and investigate in other directions. I hope that those who have time and opportunity will examine and ascertain, if possible, if these red-clover bees may not have some way of pressing the deep, delicate flower-tubes close around their tongues, making it airtight below, then raising the nectar to their honey-sacs by suction, or, by pressing the lower part of the soft, pliable tube, force the honey up to the surface so it will be in reach of the shortest tongues.

In the American "Bee-keepers' Guide," Professor Cook, after describing the physiology of bees' tongues, says: "The bee, then, can take nectar in three different ways—first, rapidly, when sipping from flowers containing much nectar by the large channels formed by approximating its maxillæ and labial palpi; secondly, slowly, from deep tubular flowers, when it sips through the central rod; and, thirdly, it may lap from a smeared surface because of the slitted ligula." So does it not seem reasonable, with their extra brain power and their many wonderful appendages, they should be able to contrive some way to obtain the coveted sweet from the red-clover blossoms, especially those which have been bred for many generations in a country where red clover is extensively grown? I do not doubt that there are many red-clover bees in the East, where they have had such excellent opportunities to become acquainted with the mode of obtaining it; but in many parts of the United States red clover does not succeed well, and in such localities I should hardly expect red-clover bees.—L. O. WESTCOTT, in *Gleanings* (American).

[I should question very much whether the bees with short tongues, even if they could make an airtight connection with the flower tube, could suck all the honey out. From a mechanical point of view the feat would be impossible unless there could be a vent at the bottom, by which the 15 lb. of air-pressure outside of the tube could be exerted to force the nectar up to and within reach of the bees' tongues. Perhaps the matter may be better explained if I illustrate it in this way: Suppose we have a bottle half full of water. Through the cork we insert a little pump, the suction of which is above the surface of the water. Now, if we work that pump the water, of course, will not come up. But suppose we insert the suction of the pump into the water there will very soon be a partial vacuum. When the air pressure in the bottle is not sufficient to force the water up the suction pump it will fail to draw water.

Of course it is true that bees have a very large brain compared with that of other insects, and we know, too, from experience, that they exhibit wonderful sagacity at times. But I do not know any way by which bees could use their brains in getting honey from red clover unless those same bees in some way puncture or tear away the base of the flower so that they can reach the nectar. Experiments, and a great amount of testimony so far goes to show that bees do not cut or bite open either the skins of fruit or the delicate tissue composing the base of the flower tubes.—ED. *Gleanings*.]

Echoes from the Hives.

Bishop's Stortford Herts, November 24.—Yesterday (Sunday) a fine day. Temperature in the shade, 49 deg., and sun shining splendid. Bees from all my hives were flying strong and in good force, after the weather for the past week.—PONICA.

Queries and Replies.

[3006.] *"Robbing" Diseased Stocks in November.*—When visiting a friend recently, who has an apiary of thirteen stocks in frame-hives, I found one stock being "robbed," although entrance was reduced to ½ in. On examination this stock proved to be infested with foul brood. The hive was at once closed, as but few bees remained, and combs and quilts condemned to the fire; the hive to be treated with Calvert's No. 5 carbolic acid. The other stocks had been packed for winter, and this being so, and the weather now so unsuitable for examining the brood-nests of stocks, and the hives each having been supplied in the usual way with napthaline, I ask:—1. Would it not be the least evil to leave bees undisturbed till early spring rather than overhaul them in November? 2. Is thin linoleum likely to prove conducive to disease as a covering in winter from its non-porosity? It has been used in this apiary

under woollen quilts, because the bees do not propolise it.—"APIARIST," *Berks.*

REPLY.—1. No possible good would result from an examination of hives already packed for winter, as stated. The inspection must be deferred till early spring, when all hatching brood, carefully noted, and measures must be taken where danger is threatened. 2. No, it is quite common to use non-porous coverings without any ill-effects arising therefrom.

[3007.] *Suspected Combs.*—Will you kindly say in B.B.J. if the enclosed comb is affected with foul brood; and if so, would you advise destruction of the shallow-frames that have been used as supers on the said hive. Colony appears fairly strong, but has not sufficient stores to carry them through the winter.—F. W., *Wisbech.*

REPLY.—There is foul brood in two of the dozen or so capped cells in comb sent. Judging by sample it is a recent outbreak of disease. We would melt down the combs referred to.

[3008.] *Queen Cast Out in November.*—Enclosed is a queen-bee which I found on alighting-board to-day (November 30). Will you please tell me probable cause of mishap? The hive in question was packed for winter on November 2, and has not been disturbed since. It is a June swarm, headed, of course, by the old queen, age of which is probably two and a half years old. Enclosed queen appears much smaller to me than the one I have been accustomed to see. Will you kindly tell me if it is the old queen, and what is best to do under the circumstances?—H. M., *Horsforth, November* 30.

REPLY.—The bee sent is an old queen, and, judging by appearance, has for some time past been failing in prolificness. Indeed, but for the jagged wings and other indications of age, it might be an unmated queen. There is no other way of remedying queenlessness at this season but by requeening the stock, if you can hear of any one who has a surplus queen on hand for disposal.

GOOD ADVICE TO BEE-KEEPERS.

We commend the following very excellent advice to the notice of bee-keepers in general as being worthy of taking to heart. It is from the pen of Col. Walker, Chairman of the Devon B.K.A., and appears in the local edition of the *Bee-keepers' Record* issued by the D.B.K.A., in October last:—

"Keeping bees is a pursuit at once delightful and profitable to those who are naturally fitted for it, but any one who is not prepared to *look after his own bees, and keep them healthy*, had far better not keep bees at all. We wish this to be understood: we should say it even though we knew that it would rob the association of half its numbers. We beg to remind all our members, new and old, that the association exists mainly for the 'encouragement and welfare of bee culture,' and that in no way can they better attain that object than by doing their utmost to keep down, and eventually do away with, the curse of foul brood, that bears so heavily on too many districts in this country.

"Words and good wishes will not do much. Rather let every member of the Bee-keepers' Association be able to say at the end of this year that he has done all in his power to cleanse his own apiary, if affected, and that by no carelessness or lack of energy has he been, directly or indirectly, the means of spreading the disease amongst his neighbours. It is not much to ask of an honest bee-keeper; a simple and even a narrow performance of an obvious duty; and yet, had even this much been done, the reports of our experts on their recent tour would never have shown certain districts so thickly spotted with foul brood as they are at this moment. There are many cases of sheer ignorance; some, we regret to say, where better things might have been expected. In all friendliness, we urge bee-keepers of the latter class, without loss of time, to cleanse themselves, and then to lend a helping hand to their less enlightened neighbours. Better than good advice is good example."

PRESS CUTTINGS.

FOUL BROOD GERMS AND THE POTATO PLANT.

The so-called foul-brood of bees was first described under that name by Schirach in 1769, but it is supposed that so far back as Aristotle it was a recognised disease, and that the remarks about it made by this writer undoubtedly refer to this particular malady. It was in 1885 that Messrs. Watson-Cheyne & Cheshire, with Koch's new bacteriological methods at their disposal, submitted this destructive disease to an elaborate scientific investigation, and shortly after presented to the scientific world a certain *Bacillus alvei*, which was accepted as the *fons et origo* of the foul brood of bees. The subject has occupied much attention, not only of apiarists, but also of scientific men, and in 1900 Mr. Francis Harrison, of Ontario, published an important memoir dealing with methods of effectually combating the disease. The latest contribution to the scientific work on the subject emanates from the University of Liège, and the funds for carrying it on were provided by the Belgian Government. Dr. Lambotte, as the result of his extended researches, affirms that the *Bacillus alvei* of Cheyne and Cheshire is identical with the well-known and widely-distributed *Bacillus*

mesentericus vulgaris, and must be placed in the same category with, for example, the ubiquitous *B. coli communis*, which, although a normal and harmless inhabitant of the intestine, may, under given conditions, become pathogenic and give rise to disease. The endowment of harmless micro-organisms by suitable means with pathogenic properties is, of course, a well-recognised achievement, and Dr. Lambotte has shown experimentally how the familiar so-called potato-bacillus may artificially become invested with disease-producing powers and can engender foul-brood disease in bees.—*Nature.*

THE TRANSFORMATION OF GERMS.

I have alluded in this column to the fact that it is highly probable that certain microbes through an alteration of their environment may undergo a metamorphosis evolving another type or species, exhibiting different powers and habits. Thus the harmless *bacillus coli* of our digestive system is believed by some authorities to be capable of developing into the typhoid microbe, and at least we know the latter's disease-producing properties are accentuated by its association with the former. In *Nature* an interesting illustration is given of an analogous case. There is a disease of bees called "foul brood," and this was ascertained to be due to the work of the *bacillus alvei*. From Liège comes the news that this germ is only the *B. mesentericus vulgaris* masquerading under another guise. This last is ordinarily harmless. The potato bacillus thus shifted to new surroundings develops "foul brood" in bees. Dr. Andrew Wilson in *Daily Chroniele*, *October* 30, 1902.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

*** A correspondent who writes under the *nom de plume* of "Bee-Farm," is desirous of obtaining information as to the suitability, or otherwise, of Hundon and Clare, Suffolk, or of Maldon, Essex, as locations for profitable bee-keeping. Will some reader who has experience of the districts named kindly send a line of reply?

PONICA (Bishops Stortford).—*Weekly Temperatures*.—While thanking you very much for kindly offering to supply a weekly record of temperature, we think the monthly "Weather Reports" now appearing in our pages suffice for the purpose.

J. F. O. (Cape Colony, S.A.)—*Insect Nomenclature.*—We are forwarding the package, duly received and quite intact, to our esteemed contributor, Mr. F. L. Sladen, who will, we hope, afford some information regarding the curious little insects enclosed, for publication in an early issue of B.B.J.

J. G. McC. (Carnforth).—*Bee Candy.*—Your sample is too hard; otherwise it is fairly good, though not sufficiently smooth—or "buttery"—in grain. If used when quite freshly made, it would, no doubt, be used by the bees readily enough, but though "only made a week ago," it is quite hard on the outside.

THOS. WELLS (Colchester).—*Lantern Slides on Bee-keeping.*—There must be some miscarriage in post, we think. The B.B.K.A. have a full set of lantern slides, which can be hired for use by members of the Bee-keepers' Association, or by non-members. If you write to Mr. E. H. Young, Sec. B.K.A., 12, Hanover-square, W., the charge for hiring will be furnished.

J. S. (Easton).—*Bees in an Oak Tree for* 100 *Years.*—We will be very pleased to have a photo of so great a curiosity as you mention, and if suitable for reproducing as a tone-block, we will have it engraved for publication.

"SOMERSET" (Crewkerne). — *Re-queening Stocks.*—The best time to re-queen stocks is in the autumn, because at that season the qualities of the queen to be deposed will be known, and judged by her past season's work. With regard to methods of introduction and "how to destroy the old one," we advise you to purchase a "Guide Book," where such operations are fully detailed. We cannot in this column undertake to teach the art of bee-keeping, for which a text-book is indispensable.

AN OLD SUBSCRIBER (London). — *Buying Queens.*—Beyond referring you to those of our advertisers who deal in queens we cannot do more than suggest a small advertisement in our prepaid column, which would probably secure you the couple of queens desired. We regret delay in reply, but it was unavoidable.

S. H. F. (Burford).—*Disinfecting Old Combs.*—No useful purpose would follow an attempt to "disinfect old combs so as not to injure them for future use," as stated, even if it were practicable to render them innocuous by any chemical process. The best course with such combs is to melt them down for wax, and use the latter for household purposes when extracted. To subject combs containing *spores* of foul brood to the fumes of burning sulphur would be of no advantage whatever so far as ridding them of the said spores.

Editorial, Notices, &c.

THE RECENT ACTION FOR LIBEL.

As notified on page 481 last week, we to-day print following particulars regarding the recent action for libel against ourselves, as Editors, and Messrs. Jas. Lee & Son, bee-appliance manufacturers.

Should the occasion arise later on we may add to the purely legal particulars which appear below a fuller report of the evidence given at the trial, seeing that a full shorthand note of the proceedings is available for use if required.

IN THE HIGH COURT OF JUSTICE.

KING'S BENCH DIVISION.

Writ issued April 22, 1902.

Between RICHARD HENRY COLTMAN, Plaintiff, and

THOMAS WILLIAM COWAN, W. BROUGHTON CARR, and JAMES LEE & SON, Defendants.

STATEMENT OF CLAIM.

1. The plaintiff is a manufacturer of and dealer in bee-hives and bee-keeping appliances, and carries on business at Burton-on-Trent. The defendants, Cowan and Carr, are the proprietors and editors of a newspaper called the BRITISH BEE JOURNAL, and the defendants James Lee & Son, carry on business at 10, Silver-street, High Holborn, in the County of London, as manufacturers of, and dealers in, the same articles as the plaintiff.

2. The plaintiff has suffered damage by the defendants, Cowan and Carr, falsely and maliciously, and with intent to injure the plaintiff in his said business, printing and publishing in the aforesaid newspaper of and concerning the plaintiff, the words following :—

"UNFAIR EXHIBITING.

A PROTEST.

May I be allowed, in my own name and that of several other appliance-makers and dealers, to strongly protest against the awards in the class for collection of appliances at the Royal Show, Cardiff. We do this without reflecting discredit on the part of the judges, but on the first prize exhibit I failed to see a single original idea. All were bad imitations of other makers' productions. My extractors were much to the front. Machines that I have worked upon for twenty years, and year by year improved were shown without a blush. Many other appliances on the same lines looked as though original articles, but had been bought for copying purposes only. I call this dishonest in the highest degree, and discreditable in every way. It is to be hoped our judges, and buyers of appliances, will award honours or credit where deserved. It is, to say the least, a bit too bad to have to take second place to another whose goods have been designed and perfected by oneself, and of which the first prize-taker has had no hand in designing. I ask, is this the right way to secure his honours? Let the best goods win by all means, but not after the above fashion.

Syston-Cardiff, June 29. W. P. MEADOWS."

PARTICULARS.

The said words complained of were printed and published by the defendants, Cowan and Carr, in their said newspaper, called the BRITISH BEE JOURNAL, published at 17, King William-street, London, W.C., on July 4, 1901.

3. By the said libellous words, the defendants, Cowan and Carr, meant and intended to convey that the plaintiff who had obtained the first prize for his exhibits in the class for "The Best Collection of Hives and Appliances" at the Royal Agricultural Society's Show, Cardiff, for 1901, had obtained the said prize by dishonesty and fraud, and had fraudulently copied in his exhibits the machines and appliances of other manufacturers and dealers, and that the plaintiff had no right to exhibit any of the machines and appliances which he had exhibited at the said show.

4. The plaintiff has also suffered damage by the defendants, James Lee & Son, falsely and maliciously, and with intent to injure the said plaintiff in his aforesaid business, writing and publishing, and procuring to be printed and published, and by the defendants, Cowan and Carr, falsely and maliciously, and with like intent, printing and publishing in the said newspaper, the BRITISH BEE JOURNAL, of and concerning the plaintiff the words following :—

"We endorse the statements contained in Mr. Meadows' communication on page 264, as applying equally to several of our specialities, to which we have devoted much time, and spared no expense whatever in perfecting. If an exhibitor can bring himself to pirate the best of the ideas, and the particular specialities of several appliance makers (who, we might say without egotism, are admittedly prominent in the appliance manufacturing trade), in some instances exact copies, in others appliances obtained in some way unknown to us complete, and who enters and exhibits them as his own, we would ask, is it surprising that first prizes are awarded to such an exhibit? In fact, as Mr. Meadows pointed out in your issue of last week the judges have no knowledge of the dishonourable methods adopted.

Disagreeable as the task is to us, we feel in justice to ourselves and others interested

who only wish for fair dealing, to enter a strong protest against such practices.

JAMES LEE & SON.

10, Silver-street,
High Holborn, W.C."

PARTICULARS.

The said words complained of were written and published by the defendants, James Lee & Son, in a letter addressed and sent by them to the defendants, Cowan and Carr, and the said letter was printed and published by the defendants Cowan and Carr in their said newspaper, the BRITISH BEE JOURNAL, on July 11, 1901.

5. By the said libellous words the defendants repeated and emphasised the libellous statements published by the defendants, Cowan and Carr in the said BRITISH BEE JOURNAL of July 4, 1901, and meant and intended to convey thereby that the plaintiff, who had obtained the first prize for his exhibits in Class No. 334 for "A Collection of Hives and Appliances" at the Royal Agricultural Show at Cardiff for 1901, and obtained the said prize by dishonesty and fraud, and had fraudulently copied in his exhibits the machines and appliances of other manufacturers and dealers, and that the plaintiff had no right to exhibit any of the machines and appliances which he had exhibited at the said show.

6. By reason of the premises the plaintiff has been and is greatly injured in his credit and reputation and in his aforesaid business.

The plaintiff claims £500 damages from each defendant.

Place of trial:—Middlesex.

H. NEWSON.

Delivered May 22, 1902, by E LYDEKKER, of Salisbury House, Finsbury Circus, E.C., Agent for R. W. SKINNER, Burton-on-Trent.

IN THE HIGH COURT OF JUSTICE.

KING'S BENCH DIVISION.

Between RICHARD HENRY COLTMAN, Plaintiff,

and

THOMAS WILLIAM COWAN, W. BROUGHTON CARR, and JAMES LEE & SON, Defendants.

DEFENCE.

1. The defendant Cowan is the proprietor of the BRITISH BEE JOURNAL. The defendant Carr is one of the editors of the said journal. The defendants, James Lee & Son, are manufacturers and sellers of bee-hives and bee-keeping appliances. Save as above admitted the defendants do not admit the allegations contained in paragraph 1 of the Statement of Claim.

2. The defendants, Cowan and Carr, admit that they printed and published in the said journal on July 4, 1901, the letter from one W. P. Meadows, set out in paragraph 2 of the Statement of Claim. Save as above admitted they deny the remaining allegations in the said paragraph.

3. The defendants, Cowan and Carr, deny that the said words bear the meaning alleged in paragraph 3 of the Statement of Claim.

4. The defendants, James Lee & Son, admit that they wrote to the said journal the letter set out in paragragh 4 of the Statement of Claim. The defendants, Cowan and Carr, admit that they printed and published the said letter in the said journal on July 11, 1901. Save as above admitted they deny the remaining allegations in the said paragraph.

5. The defendants deny that the said words bear the meaning alleged in paragraph 5 of the Statement of Claim.

6. The defendants, Cowan and Carr, as to the words set out in paragraph 2 of the Statement of Claim, and all the defendants as to the words set out in paragraph 4 of the Statement of Claim, say that in so far as the said words consist of statements of fact, they are true in substance, and, in fact, in their fair and ordinary meaning, and that in so far as they consist of comment, they are fair comment upon matters of general public interest.

PARTICULARS ARE AS FOLLOWS:—

At the show of the Royal Agricultural Society of England, held at Cardiff on June 26, 1901, the plaintiff exhibited and obtained first prize in Class No. 334 for "Collection of Hives and Appliances" (Open to Manufacturers of Bee Appliances only, being articles sold in the usual way of trade). The plaintiff, in his said exhibit, showed one of Messrs Lee & Son's Observatory Hives, which he did not, and could not, sell in the usual way of trade. The said exhibit also contained copies of "Extractors" and "W. B. C. Ends" for use on hive frames, made by W. P. Meadows. He also, at the same show, exhibited in a class distinct by itself a copy of a "Frame Hive for cottagers' use," which he had bought from Messrs. James Lee & Son.

In June, 1899, the plaintiff exhibited at Maidstone, and obtained first prize for, a "Frame Hive for cottagers' use." The plaintiff exhibited the said hive, with the addition of a few appliances worth about 3s. The hive exhibited by the plaintiff was one he had bought from Messrs. James Lee & Son.

At the Royal Agricultural Show at York, in 1900, the plaintiff exhibited a hive he had previously bought of Messrs. James Lee & Son, under exactly similar circumstances.

In the plaintiff's current catalogue, on page 5, the plaintiff advertises a Three-Frame Observatory Hive (with an illustration). The said illustration is copied from Messrs. James Lee & Son's Three-Frame Observatory Hive.

On page 3 of the said catalogue of the plaintiff he advertises an Improved Non-Swarming Hive on the W. B. C. plan (with

an illustration). The illustration is copied from Messrs. James Lee & Son's Non-Swarming W. B. C. hive.

On page 22 of the said catalogue the plaintiff advertises Registered Section Cases (with an illustration). The said section cases are those manufactured by Messrs. James Lee & Son, who have registered the design.

On page 14 of the plaintiff's catalogue for 1900 the plaintiff advertises honey extractors (with an illustration). The said illustration is copied from an extractor, or from an illustration of an extractor, of one W. P. Meadows.

The plaintiff also with his advertisements supplies copies of order forms, which are copied verbatim from the order form of one E. H. Taylor, a manufacturer of bee appliances.

MONTAGUE SHEARMAN.

Delivered the 30th day of June, 1902, by Cook & Ellis, of No. 7, Mark-lane, E.C., Solicitors for the defendants.

IN THE HIGH COURT OF JUSTICE.

King's Bench Division.

1902.—C.—No. 1288.

Between RICHARD HENRY COLTMAN, plaintiff, and THOMAS WILLIAM COWAN, W. BROUGHTON CARR, and JAMES LEE & SON, defendants.

REPLY.

The plaintiff as to the defence says:—That he joins issue thereon save in so far as the same consists of admissions.

H. NEWSON.—

Delivered July 9, 1902, by E. Lydekker, of Salisbury House, Finsbury-circus, E.C., agent for R. W. Skinner, Burton-on-Trent.

The trial took place in the HIGH COURT OF JUSTICE (King's Bench Division) on Thursday and Friday, November 27 and 28, 1902, before Mr. Justice LAWRANCE and a special jury.

The plaintiff claimed £1,500 damages.

After hearing the evidence Mr. Justice LAWRANCE summed up as follows: Gentlemen of the Jury,—I will not detain you long. This action is brought by the plaintiff, Mr. Coltman, to recover damages against the proprietors of a newspaper called the BRITISH BEE JOURNAL and Messrs. Lee, who wrote to the paper. What is complained of by the plaintiff is that what was said is libellous, and imputes to him dishonest or dishonourable dealing.

Now, it seems that there had been a show—the Royal Agricultural Show at Cardiff—and the Bee-keepers' Association had an exhibition there in which they showed appliances interesting to people who keep bees and produce honey. Some time ago, as far back as the Maidstone Show, which was held in 1899, —the Cardiff Show being in 1901—there was some criticism with regard to what had been done in the way of showing in the "Collections class." It seems that prizes are given for the best "Observatory hives," "Frame hives," "Cottage hives," and so on, dealing with different things. Among other things there is one class for a Collection of Hives and Appliances, the only rule applying to that is that it is "Open to Manufacturers of Bee Appliances only, being articles sold in their usual way of trade." What has taken place with regard to the class in question is this, that as to persons who have exhibited therein other persons' goods, comments have been made, not of the kind we are trying now, but comments were made at Maidstone in the year 1899 on the plaintiff showing these things. It is quite true there is nothing in the rules to say that the goods shall be the manufacture of the person who is showing them. There is no law that has been written yet that somebody has not got behind. I dare say you know the old saying about "driving a coach and horses through an Act of Parliament." But a man cannot shield himself behind rules that are made by somebody else. You see what I mean, gentlemen. It is not enough for him to say "certain persons made certain rules, and because I am within those rules I have not done that which is dishonourable." The question is whether he has or has not in your opinion done it. That is the only question. It is idle, as it seems to me, to shield oneself behind rules which do not really apply. You heard what the officer of the Society said in answer to me to-day. I said, "You find your rule does not apply to the particular thing"; and he said, "It does not"; then I said, "I suppose you will make it your business to alter your rule, and do what is right"; and he said, "We shall." If this means that this "Collection" should be personal—the collection of the manufacturer himself of a particular kind of hives; or if it is merely to mean that a man may go into the market and buy a hive because it is the best obtainable, then go to somebody else who sells other appliances, section-racks and so on, go all round in that way; and if the only condition is that he is to be a manufacturer of bee appliances—if that is all, anybody in a show could suppose that if that rule was made by the Bee-keepers' Association—the object being of course to stimulate new ideas, new invention, and to improve the manufacture of hives and the keeping of bees, and I suppose rightly that this "Collection of Hives and Appliances, consisting of the following articles (open to manufacturers, only being articles sold in their usual way of trade")—I suppose, I say, that the only conclusion one would arrive at is that, broadly speaking, they are their own things. It does not seem to me that that is met by making an objection which seems to me a most trivial one: "Oh, nobody makes all these things themselves," because they have to send to America for some very small part.

You remember one of the manufacturers said it was 6½d. out of a total of £1 4s. It seems these things are made in America cheaper than they can get them made here, and therefore they get them in America. To say that that man is in the same position as a person who comes and shows in a "Collection" things bought at different persons' shops all round, having availed himself of the invention of other people, and having added nothing whatever himself to the subject matter, seems to me not to be on all fours at all. A man designs a hive, invents a hive. He must send to America for parts of it; but if he sent to America for the whole of it, it would still be his hive. He may say, "I designed the hive, I cannot get it made in England on satisfactory terms, and I am going to send it to America to be made, for unless I do, I cannot get my hive made at a profit."

Now, gentlemen, I am going to read the letter and ask you broadly what you think. I say "broadly" because when counsel on either side has dissected every word, it is as well to take a broad view of the case as far as we can. I am going to ask you, is this a direct attack by the defendants, or rather, I should say, by the defendants, Messrs. Lee; for the other people are really defendants, because they are the proprietors and publishers of the paper; and it is not pretended for a moment they have anything more to do with it than that they printed and published the letter. Is this an attack by Messrs. Lee & Son, who are the only defendants here who wrote or had anything to do with writing this letter with regard to the plaintiff; or is it a protest against the manner in which this showing in a "Collection" is carried out? If it is the former, it is actionable. A person who publishes a libel that is untrue has to pay damages, and the question of damages is one entirely for you. If, however, it is a protest, although couched in strong language—if it is a fair protest against a principle, and not a direct attack on an individual (for that is how I shall leave it to you), it is a case in which the defendants would be entitled to your verdict. That is why this part of the case—the part of the case that Mr. Stanger vehemently urged upon you, what is called the "single exhibit" (the frame hive)—becomes important. Now Meadows is the first person who wrote, and he wrote at some earlier time the letter I am going to speak of. Before reading that, let me say this: Bear in mind what I have said about that, and remember what has been said by the witnesses called. One must remember—it is only fair to do so—that of all the witnesses who have been called on behalf of the defendants, there is nobody who has spoken more severely against the system than two witnesses called for the plaintiff. Those two gentlemen—Mr. Young and Mr. Taylor—distinctly said that, in their opinion, it would be discreditable in a "single exhibit" class to exhibit somebody else's goods as against the exhibitor himself. They have spoken the more strongly because they are called to support the case of the plaintiff. It is the more strong when you get the witness who comes for one side and speaks on the other. Now the letter of Meadows is headed "Unfair Exhibiting," and the question you have to keep in your mind during the time I read it is this:—Is this a protest against the system carried out, or is it, as is alleged by the plaintiff, an attack on him, or is it, as was said by the counsel for the plaintiff, an attack on him in order to crush the man and prevent him carrying on his business? It says:—"Unfair Exhibiting. A Protest. May I be allowed, in my own name and that of several other appliance makers and dealers, to strongly protest against the awards in the class for collection of appliances at the Royal Show, Cardiff. We do this without reflecting discredit on the part of the judges, but on the first prize exhibit I failed to see a single original idea. All were bad imitations of other makers' productions. My extractors were much to the front. Machines that I have worked upon for twenty years, and year by year improved, were shown without a blush." That is to say, hives were put in the exhibit and some other machines—machines which he had worked at for twenty years. Then, "Many other appliances on the same lines looked as though original articles, but had been bought for copying purposes only. I call this dishonest in the highest degree, and discreditable in every way. It is to be hoped our judges and buyers of appliances will award honours or credit where deserved. It is, to say the least, a bit too bad to have to take the second place to another whose goods have been designed and perfected by oneself." That is to say, It is rather hard for me to see a man take a prize for my goods—goods I designed, and which he bought and put in his Collection, although I had a collection of my own, and of which the first prize taker has had no hand in designing. "I ask, is this the right way to secure his honours? Let the best goods win by all means, but not after the above fashion." That is written by Meadows. He had an action brought against him; Meadows apologised, and there was an end of that action as far as he was concerned. Some people do not like actions. I will not say who are the wisest people. Some people will do anything rather than go to law. I should not like, in the presence of the gentlemen sitting down there, to say that they are the wisest people, but at all events they get out of it very quickly. Of course, that is not to reflect on anybody else. That would be unfair. An attack might be made upon two men; one man might say, "I would do anything before I fought," and pay costs, and there is nothing more. Another man might say, "I will see you hanged first, and I will fight to my last breath." So you

must not let the fact that Meadows settled the case reflect against the other man. He must stand on his own merits, but not by the fact that Meadows settled the other action. Now, gentlemen, shortly afterwards another letter appeared, and this is the letter on which this action is brought. It endorses Meadows' letter, and therefore Meadows' letter has to be taken into consideration. It says, "We endorse the statements contained in Mr. Meadows' communication on page 264, as applying equally to several of our specialities to which we have devoted much time and spared no expense whatever in perfecting." Just the same complaint. "If an exhibitor can bring himself to pirate the best of the ideas and the particular specialities of several appliance makers (who, we might say without egotism, are admittedly prominent in the appliance manufacturing trade), in some instances exact copies, in others appliances obtained in some way unknown to us complete, and who enters and exhibits them as his own, we would ask, is it surprising that first prizes are awarded to such an exhibit?" That is, if a man may go round and buy the best articles in the market of different people and put them in one collection although he has not contributed one single idea, is that the sort of thing that is intended and that the man should take a prize for? That is what it comes to in plain English. It goes on: "In fact, as Mr. Meadows pointed out in your issue of last week, the judges have no knowledge of the dishonourable methods adopted. Disagreeable as the task is to us, we feel, in justice to ourselves and others interested, who only wish for fair dealing, to enter a strong protest against such practices." Therefore, you have Lee & Son adopting the letter of Mr. Meadows, and what they are saying is that they are complaining of the methods which have been adopted in this "Collection" by a person who may be a manufacturer of bee appliances in the smallest degree, and yet may avail himself of the designs or inventions of other people by going and buying goods, and putting them all in one "Collection" together. Now, gentlemen, you had one of the judges before you. A great deal has been said about the other judge not being called, but the judge that was called, Mr. Jonas, said he did not approve of what was done in the matter. He did not go further than that. Again, you have had your attention called to these rules, and one would suppose the rules were a sort of law that nobody could get round in any way. The judge is bound by them, of course. He comes to the show to judge, and he has to see the "Best Collection of Hives and Appliances." There was another gentleman who was called early in the proceedings, the Secretary of the Bee-keepers' Association, and you heard what he said about the rules—that the rules do not meet the case, and will have to be altered.

Now, a good deal has been said—and it is important in this matter—with respect to Class 338: "Most complete and inexpensive Frame-hive for Cottagers' use, unpainted, price not to exceed 10s. 6d." True, it did not get a prize, but it was intended to get a prize if it could. That was taken bodily from Lee & Son; it was bought from them, they themselves being exhibitors at the show at the time, and it was exhibited as a "single exhibit." There is not one person who has been called—I am speaking from memory, but I trust to your memory to check me—who says that is honest. Many of them denounce it entirely. Two gentlemen called for the plaintiff, Mr. Taylor and Mr. Young, both denounce it. They say, "Whatever doubt there may be about the Collection"—and when speaking about a "collection" they are only speaking about a collection having regard to the wording of these rules, but the wording of the rules made by the Bee-keepers' Association is not to be the test of what is honourable or dishonourable, because that is really the way of looking at it; still, they all say—plaintiff's witnesses and defendants' witnesses—that it was not an honest or honourable thing to do. Nobody could doubt this. Supposing any one who knew nothing about hives or anything of the sort sees that a prize is given for the "best collection of hives." You or I go to see it. What conclusion would you draw if you saw this on the catalogue? Why, that he was exhibiting it himself, and not that he bought it two days before of somebody else who invented it, or a man who spent his money and brains upon it. The plaintiff admitted he did that, and it is admitted by his own witnesses that that was not an honourable thing to do. With regard to the other part about the "collection," you heard Mr. Lee say—and several other persons called said the same—that in a general collection nobody could find the whole of the materials for it; but I think he said that only one-tenth of his "collection" was of things manufactured by other people. The whole of the plaintiff's collection, so far as we know, was made out of miscellaneous articles bought from A, B, C, and D, all over the place, and, so far as we know, no part of it was manufactured by the plaintiff himself. I say so far as we know.

Now, gentlemen, you must first say whether you think that these words are justified. You shall have the two letters before you.

MR. NEWSON: Might I interrupt your Lordship? Yesterday, the plaintiff said, as I gathered, that some of the articles he exhibited in the collection were those he manufactured, though not all. That was his evidence as I understood.

MR JUSTICE LAWRANCE: I will see what he said. Where did he say it?

MR. NEWSON: In his examination-in-chief.

MR JUSTICE LAWRANCE: I see he said:—

"I exhibited other persons' machines as well as my own inventions."

MR. NEWSON: Yes; "As well as my own inventions." That is what I was referring to.

MR. JUSTICE LAWRANCE: Yes, but the amount of them we know nothing about—not a word whether it was 2d. in the £ or whatever it may be.

MR. NEWSON: He was not cross-examined as to that.

MR. JUSTICE LAWRANCE: We do not know a word about that. Now, gentlemen, what the defendants say in answer is this:—Mr. Cowan is the proprietor of the BRITISH BEE JOURNAL, and Mr. Carr is one of the Editors. It is really the same defence for all the defendants. They say that, so far as the words consist of statements of fact, they are true. That is for you to say; and then they say that, as far as they consist of comment, they are fair comment on matters of general public interest. There is no comment by the Editor of the paper. Very often when there is a letter published there are observations made afterwards, but there is nothing of that kind here. The question is, are these facts true in substance and in fact? If so, the defendants are entitled to your verdict. If they are not true in substance and in fact, the plaintiff is entitled to your verdict, and the question then comes, what damages is he entitled to? And when you come to take into consideration what damages he is entitled to, you will have to say on that matter what view you think is the proper one to take with regard to that which all the witnesses, plaintiff's and defendants', admit was an improper thing to do, namely, to exhibit in a "single exhibit" class a hive as his own which was in fact Lee's, and which Lee was exhibiting in the same place. That is the use of it—to show that he was not acting an honourable part with regard to that—and that fact would have a considerable influence on your mind on the question of damages, if you think it is a question of damages for the plaintiff—that is to say, if you find the words are not true in substance and in fact. If you find for him, then, his conduct with regard to that matter, of course, would have a considerable influence upon you in the question of damages.

The jury consulted without leaving the box, and gave a verdict for the defendants.

The witnesses called for the plaintiff were Mr. Edwin H. Young, and Mr. E. H. Taylor.

The witnesses called for the defendants were Mr. James Lee, Mr. Robert Lee, Mr. J. H. Howard, Mr. H. W. Brice, Mr. Henry Jonas, and Mr. W. Herrod.

An application by plaintiff's counsel for stay of execution was refused by his Lordship.

Mr. Terrell, K.C., and Mr. H. Newson appeared for the plaintiff, the Hon. Alfred Lyttleton, K.C., and Mr. Montague Shearman (instructed by Messrs. Cook & Ellis, 7, Markjane, E.C.) representing the defendants.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

COMMENTS ON CURRENT TOPICS.

SOME MORE FAMOUS HONIES.

[4972.] *Sainfoin.*—This is undoubtedly a very fine honey, and it proves its excellence by taking a leading place year after year on the show-bench of many of the agricultural exhibitions in the south of England. It is not quite so favourably viewed in the north, and even the finest sample has frequently to take a second place in open competition. The standard of taste is perhaps founded on different principles. The particular characteristics of sainfoin as a table delicacy, though fine, are not so abiding as some other honies, and one might tire of it if in constant use as a staple adjunct of food much sooner than they would of that produced from its cousin—if I may be allowed to designate it by that grade of kinship—white clover; which, used day after day, never palls on even the most delicate palate. A honey lover can return to it time after time without experiencing any feeling of satiety, as might take place with a sample conveying a very pronounced flavour and aroma as, for example, that from heather. The blending of the several properties are in clover so fine and evenly-balanced that the whole forms an almost ideal assimilation. Sainfoin is lacking in this important characteristic. The plant is not much grown in Scotland, as possibly our vigorous climate is found to be unsuitable for its successful development, and the soil may be lacking on which it luxuriates. An interesting fairy tale records how it got its name. It was on a bed of this plant in a stable of Bethlehem nearly 2,000 years ago that an Infant lay who was to revolutionise the world; "Holy Hay" they called it, and its name has ever since been *Saint Foin*, or sainfoin. The fancy is a pleasing one, whether it has any foundation in fact or not.

Raspberry.—Not often can fruit blossom be relied on to yield anything like an appreciable surplus, but where fruit is grown in abundance it yields in favoured seasons large quantities of a very finely flavoured delicacy. In a district such as that around Blairgowrie along the banks of the "ireful Ericht," where the raspberry is almost ubiquitous, it is a staple source of nectar. "Fruit farms extend from 4 to 80 acres, but small farms of 5 and 6 acres are more common; and it is estimated

that 500 acres are under fruit. During the past season 1,700 tons of fruit were sent off." Here is an almost ideal spot for planting down an extensive apiary with some prospect of a certainty that it could be made to pay, as white clover is also abundant, limes are numerous, and heather blooms profusely in close proximity to the town. Strawberries are also very extensively grown, and the blossom must often be a veritable mine of wealth to the diligent little foragers.

Basswood (*Tilia Americana*) yields an abundant flow, and is perhaps the most fruitful nectar-giver of all our flowers and trees. By all accounts it is not to be relied on *every* year, and "once in a great while," as they would say over there, it proves unproductive, or the weather militates against the successful gathering of its sweets. After our experience this year we know it is not singular in this drawback, as even our most reliable plants fail at times. But I am safe in saying that none of our sources yield like basswood. Mr. Root states that he has a single hive giving as much as 43 lb. in three days, and Doolittle caps that by a record of 66 lb. in the same time. That is enough to make our mouths water! I have never tasted basswood honey, so I can only give an opinion second hand as to its quality. It is fair and pleasant to look upon, either as a liquid or a solid; and is, as a rule, agreeable and palatable when partaken of in moderation or at intervals; but at times it tastes strong and rank, and one would sooner tire of it than they would of many of our standard honies.

Lime Honey.—Closely allied to the last, but bearing distinctive features of its own, is the nectar yielded by *Tilia Europea*, and its allied genera. What a wealth of bloom an avenue of lime trees may be during the closing days of July must be seen to be fully appreciated! I have before described the glad and joyous sound made by the bees working thereon as a multi-millioned hum. The sound and the scent are almost overpowering on some bright and sunny summer day, when Old Sol pours his glorious rays in a mighty flood of uninterrupted brightness. On such a day the flowers have a power of secreting a constant supply which never runs dry, and they seem almost to drop nectar. Each floret has a series of what I may call nectarious cups, which are full to overflowing, and in no other flower I know can the bee load up so fast, or with so little exertion, as on the fair flowers of the glorious linden trees. The quality of the honey is good, but if I were asked my candid opinion, I am not prepared to accord it a place in the first three if a list were demanded.

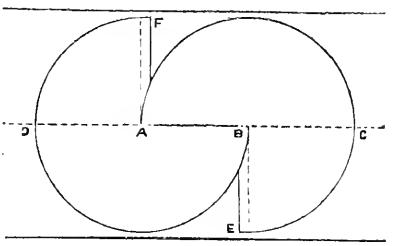
Alfalfa.—This is another American honey which some laud to the sky, as witness the following:—"This is not only the finest in appearance of any honey I ever saw in my life, but it is also equal in flavour to the best. It is almost, if not quite, as clear as water, and yet during a hot July day it will scarcely run. It is clear as crystal and exquisite in flavour." When I add that the season of yield lasts "from July to September," and that it is reported as secured "Not only by the ton, but by the car load," it must be conceded that the plant is an admirable bearer, and that the product is a most desirable sample deserving to be ranked high amongst the leading kinds of honey. Some of the "takes" recorded from it approach the region of the fabulous. I should like to learn if anything like a successful attempt has been made to introduce the plant into this country?

Skep Covers.—Some interest has been shown in the felt covers mentioned in my last, and, having had requests for a fuller description, I append details, together with sketch, which will make the description clear and simplify matters:—

Take a piece of felt 4 ft. long, the breadth being 2 ft. 8 in.

Draw a line with chalk along the centre from D to C.

With A as centre, describe the circle B. D. F.



Then, with B as centre, describe circle A C E.

Then draw heavier lines as in figure.

Cut out along the circular lines B. D. F. to B. Then along lines A. C. E.

You will thus have two covers cut out.

Draw the straight edges together until one edge touches the dotted line. Tack these two edges together into a thin lath. The result is a shapely cone and a very effective skep cover.

Try the sketches and cutting out on a piece of brown paper before operating on the felt.—D. M. M., *Banff.*

THE STANDARD FRAME.

CAN IT BE IMPROVED?

[4973.] The question of strengthening the "Standard" frame now under discussion in your pages will, I trust, add to the general adoption or a frame giving such a desirable result, but I maintain that the following proposition must be adhered to, viz., any alteration made *must* allow such frame to *interchange* with the Standard frame, and with the almost universal "W.B.C." ends, which are, I venture to say, used on nine-tenths of the frames now in general use. I also wish to say that a wider

top-bar is not a recent addition as your correspondent, Mr. H. Edwards, supposes, nor is it so recent as Mr. Woodley thinks when he harks back fifteen years. Let me say they first came under my notice some *twenty-five or thirty years ago* in the apiary of the late Rev. George Raynor, and the advantage of such a frame in preventing brace-combs was so evident, that I at once adopted them in my own apiary at the time.

In the discussion following Mr. Weston's address at the conversazione in the Dairy Show week, on "Brace-Combs and their Causes," I gave my experience, extending over a long period, of these *full* inch-wide frames in reducing brace-combs to a minimum. I also gave the source of my information, but as this was not reported, some gentlemen not present at the meeting naturally thought that I was taking credit for an improvement carried out by another.

When we started our appliance business in London this wide frame was reintroduced, and brought to the notice of many; and to me it was amazing to find that the great majority of bee-keepers would have none of it, because it was a departure from the "hall marked" frame of the B.B.K.A. On the other hand, it should be particularly noted that it is *interchangeable* with the Standard frame. Several of our friends, however, "masters in the craft," tried them, and they very rapidly displaced the ⅞-in. by the *full* 1-in. wide top-bar frame. On starting our apiary at Andover the frames used were all of this pattern—that is to say, the top-bar measures 1 1/16 in. wide (it has no saw-cut), by ⅞ in. thick, the ends or "lugs" being reduced to ⅞ in. wide, which allows the use of the ordinary "W.B.C. ends." The side-bars are the same width, and the bottom bar ⅞ in. wide—the latter detail I consider an important one. With such a frame, in which the foundation is wired and fixed by a method I believe peculiarly my own I get straight combs, no sagging (or sinking) of the top-bar, and am practically free from brace-combs.

There was a chorus of complaints of brace-combs at the conversazione, and I then decided that I would devote a swarm or a stock to getting a set of such frames filled, with the view of bringing the stock box and the contents to the conversazione at the end of the season next year.

This decision might be extended and adopted by those others who are now, each in their own way, recommending their several pet frames. Such exhibits would be of great value and in the highest degree instructive.

Thicker top bars are sent out by some makers, most of which are reduced to ⅞ in. thick each end, sufficiently far in length to drop in the 1½ in. space, a shoulder being left which, to me, is an abomination. These shoulders are propolised with a great difficulty in readjusting after being removed.—JAMES LEE, *Monk's Acre Apiary, Andover.*

HEATHER HONEY

FROM ERICA CINEREA.

[4974.] I very willingly respond to the request of your contributor "D. M. M." (on page 471) for information with regard to the character of honey gathered from bell heather (*Erica cinerea*). But first let me say it is a good thing for bee-keepers living in different localities to compare their experiences on the various subjects connected with their loved craft, because we are all liable to judge from our own particular experience, and therefrom formulate what we conceive must be a general rule, which rule being accepted, may oft-times lead us to a wrong conclusion.

My observations lead me to conclude that plants which yield a considerable quantity of honey in one district, may yield little or none in certain other districts, or at least, if they do yield any, the bees (for reasons obvious or otherwise) do not gather it. In our part of the Isle of Man the bell heather blooms from the beginning of July to end of August.

As long as the white clover, wild sage, and other honey-bearing flowers continue to yield a large supply of nectar, the bell heather may remain to a large extent unvisited by the bees; but when these mentioned sources begin to fail, then some bees will repair to the heather, and during this interval we have a very excellent heather-blend of honey. In the year 1899 I sent a sample of this honey to our junior Editor, and the following reply appeared in the B.B.J. of August 24, 1899:—

"The sample received is excellent in colour, consistency, and aroma. The flavour is much milder than that of the full-flavoured Scotch heather honeys, but—mainly on that account—it might, we think, be preferred by honey users in the south, who consider the Scotch product too strong in flavour for frequent use. —EDS."

In the same year I took a special prize for heather honey at the Manchester Colonial Exhibition, for this same blend in a state of granulation. One of the judges bought my exhibit, and informed me that it was one of the best flavoured honeys he had ever tasted.

During the last two weeks of August the chief source of honey is the bell heather. I have many times gone to the top of a small mountain near us, and seen thousands of my bees going to and fro in a constant stream, and all engaged on the bell heather. The honey is a very dark rich red colour. When extracted it is thinner than clover honey. It soon granulates into a fine smooth grain and turns a brownish-yellow colour. The aroma is magnificent, and fills the extracting room with the lovely scent, which may be enjoyed when crossing a moor of this heather in the Isle of Man in the month of August. When working on it my bees store honey very rapidly; indeed, as a honey-yielder it surpasses any plant I know.

At the beginning of September, and whilst

large tracts of common "ling" are in full bloom, my bees suddenly cease from storing surplus, and it has been long a source of wonder to me why this should be, if the common ling is invariably a good honey yielder. In this locality the common ling gives off very little scent, and it yields a very large amount of pollen, and is worked (presumably for honey) by countless thousands of wild bees. My experience of "ling" honey is confined to a few clots which will not extract, at the end of the season, of a gluey consistency and yellow colour. I received a small sample of "ling honey" from a friend in Scotland, and while it is much lighter in colour than bell heather honey, it is of a much more pungent and strong acrid flavour than anything I get.—LANCELOT QUAYLE, *Glenmay, Isle of Man.*

HEATHER HONEY.

ERICA CINEREA ON BOG-LAND

[4975.] I notice your correspondent, "D. M. M.," Banff, on page 472 of BEE JOURNAL, says that even the true heather, *i.e.*, *Erica cinerea* (or bell heather), forgets to secrete nectar when it grows on low, marshy, or boggy ground." I should like to know if this is an established fact, because the first week in August I took six hives with supers full of bees on to Chat Moss, over which Stephenson crossed when laying his railway from Manchester to Liverpool. Acres of heather lay close to the hives, yet the bees never appeared to work on it at all, and at the end of September I took off the supers, and on examining the brood-chambers found them, to my intense disgust, foodless! The bees also, in four of the hives, had dwindled down to four or five seams in each hive. I gave them no food, but packed them up for the winter, and I intended to leave them there until next season, as the distance is not far from my home, and the bees will have just as good foraging ground as regards the flowers of the fields as they would have if I brought them home.

But "Chat Moss" is all bog, so according to "D. M. M." it is no use leaving bees there for the sake of the heather.

Will our Scottish friend please oblige further on this point, or will the Editor give his opinion?—J. L., *Boothstown, Manchester.*

[It is, we think, well known among bee-keepers who are "moor-men" that none of the *Ericas* yield nectar in appreciable quantities from wet bog-land.—EDS.]

FRAME-CONSTRUCTION, &c.

BEESWAX FOR SHOWING.

[4976.] Mr. Edwards, in his remarks on various kinds of frames, rather "damns with faint praise" the method of fixing foundation adopted by Messrs. Abbott Bros.—*i.e.*, the double-groove and wedge—alleging that the wedges give way in his hand.

Really, one is tempted to prescribe him a dose of his own "cure," viz., that "gentle kick" which he advises; as I am fully persuaded that, if the wedges fall out with him, it must be entirely his own fault.

Personally, I can fully endorse what the firm mentioned say of their method—viz., "If the wedge is well pressed in from end to end (which is perfectly easy to do), not one in a thousand will give way." Of all the scores I have used, *I have never had one give way yet.* I consider the double-groove and wedge, with the $\frac{1}{2}$ in. top-bar, a long way ahead of the usual $\frac{7}{8}$ in. bar with saw-cut right through. At the same time, I see no need for a bar $\frac{5}{8}$ in. thick, as preferred by Mr. Edwards. This is going to the other extreme. How any one could revert from the above neat and thoroughly efficient mode of fixing a full sheet of foundation to the old and time-wasting way of using melted wax, I cannot imagine.

Speaking of wax reminds me that when Mr. Berry says (on page 474) that "every bee-keeper has the same chance as himself," he would have done well to have qualified this statement a little by limiting the number to those who live in *heather* districts. Wax rendered from combs worked in places where the "ling" yields largely of honey has a fine and distinctive aroma, almost wholly absent in that obtained from other sources, usually denominated "flower" honey. It is this fine and lasting aroma which places Mr. Berry's wax at "the top," not the colour or cleanness of the sample. I had some myself this season (almost entirely from "cappings") which, as near as I can judge, surpassed in colour (lightness) any of the samples at the Dairy Show, but the characteristic odour of beeswax from a heather moor was lacking.—S. P. S., *Rochford, Essex.*

SWARM CATCHERS.

EXPERIMENTAL TRIALS.

[4977.] In reply to Mr. Edwards's personal request to myself in his postscript at foot of page 438 a week or two ago for a report on his "swarm catcher," I beg to say that my report on same had already been sent to the B.B.K.A. Council, who expect a report on all new appliances tested here. In the first place, and with regard to the swarm catcher in question, a special "fitting" for underneath the brood chamber is needed for each different type or pattern hive, and even when this is done from measurements supplied this portion of the appliance is not sure to fit, as in the case of the one sent here, which had to be altered although made for and fitted to a "W. B. C." hive. The sorting out for fixing in the spring would therefore be a great nuisance, I think, in a large apiary, unless the hives were all made exactly alike. Add to the

above the fact that the brood-chamber must be lifted clear of the floor-board in order to put the "fitting" in which the catcher slides in position, entailing careful manipulation to prevent crushing bees. It will thus be easily seen how great a loss of time is entailed, and that in the busiest part of the season. I find it also possesses a fault noticeable in the "Brice" catcher, before the latter was altered and the fault remedied by substituting "standard frames" in the portion in which the swarm is hived. Mr. Edwards's "catcher" is fitted with very shallow frames, so that where a swarm takes possession the bees would be too crowded in this confined space, thus causing considerable excitement, and possibly in hot weather suffocating some of the bees.

Unfortunately, the stock upon which the catcher was placed here did not swarm, so I have not been able to test its action in such a case. The greatest drawback I saw in working the appliance (and one that would prevent me personally from adopting it) is the fact of the bees building brace-combs in the space between the bottom-bars and floor-board at the back of the hive—*i.e.*, in the space which occurs between the V-shaped passages of the "catcher." This fault resulted in both my assistant and self receiving a number of stings, besides the nuisance of having to clean off these brace-combs. The cost also places, I fear, the catcher beyond the reach of the average bee-keeper.

Summed up briefly, then, I consider the appliance is "ingenious" but "wrong" in construction, and it will need a lot of alteration and simplifying, in my opinion, before it becomes of practical use.

Having thus reported publicly on the above, it is only fair to give my experience with the "Brice catcher," which has been in use here in the apiary for five years. In this case the "catcher" can be placed in position or removed in less than one minute by a couple of turns of wire round two eyelets; this, too, without disturbing the brood-chamber or even the bees. It has "standard" frames which will comfortably accommodate the swarm when caught. It works every time the swarm issues, as several photographs taken by and in possession of myself will testify. One drawback, "if such it can be called," is that it is the scraping off of the pollen-pellets from the legs of the worker bees. This, however, I consider rather an advantage, as it prevents pollen-clogged combs, and as the catcher is in use only a short time the bees can easily make up the winter store after its removal. I fear I am no friend of the appliance-dealer, but I still believe in the bee-keeper making his own "bee gear," and buying as little as possible. Should he desire a "swarm catcher," the last-named one is simple in construction, and, with one as a pattern, the merest tyro in the use of carpenters' tools can easily make them from boxes purchased from the grocer for a few pence, and so save expense.—W. Herrod (Bee Expert), *The Horticultural College, Swanley, December 6.*

THE "RYMER" METHOD.

[4978.] I have been looking for reports as to results from the working of the above method during the past season, and, except from Mr. Rymer himself, there have been none. Its failure in the hands of those who tried it during 1901 seems to have convinced bee-keepers that the system is impracticable, but those who sent in the unfavourable reports brought failure on themselves by blindly following Mr. Rymer's way of working, without considering whether it was suited to their districts or not. One bee-man made success impossible by giving the second brood-chamber only a few days before the honey-flow began; others, who ought to have known better, tried the method in districts where there is no heather crop.

They all seem to have overlooked the fact that the method, as worked by Mr. Rymer, is applicable only to the requirements of Levisham, which is unlike the majority of white clover-heather districts in that, between these two crops there comes in a third crop of black honey of little commercial value, but quite good as bee food. When Mr. Rymer separates the brood-boxes the "black stuff" begins to come in, and as fast as brood hatches out of upper storey the cells are filled with honey. At the end of three weeks these frames contain stores instead of brood, are removed, and replaced by sections which the immense population quickly fill with the incoming heather honey. It is easily seen that Mr. Rymer's method is quite suitable for his own district, as long as this crop of "black stuff" has to be dealt with.

There seems to have been no reports on the method from heather men, with the exception of "D. M. M." who mentioned that it had not proved a success in his hands. No details were given, but probably Mr. Rymer's system was carried out without any deviation, with the inevitable result that the upper story was blocked with the heather honey which ought to have gone into the sections. "D. M. M." is a most able and successful bee-man, and that the "Rymer" method should fail in his hands must have deterred many lesser bee-keepers from giving it a trial. Had he adapted the system to his district by turning the lower brood-box upside down, and at the same time tiering up with combed sections in his usual way, the result would have been very different, as no brood would be raised or honey stored in the inverted combs. I am inclined to think that the half-hearted way in which the "Rymer" method has been tried is altogether owing to the prevailing impression among bee-keepers that the present way of working is perfect, that bee-keeping has now reached its zenith, and that no further im-

provement is possible. The men who used the curious hives described in "Ancient Bee Books" (B.B.J., 1901), the champions of the "Pettigrew" system of skep management, and those who worked with the far-famed Stewarton hive were all, no doubt, confident that they had reached perfection, but all their systems have had to give way to the present one of modern bee-keeping; and modern bee-keeping must move with the times.

This is an age of progress, and of fierce, unsparing competition. On every hand we see that old-established firms have had to revise their former methods of doing business or else go to the wall. This is the case in every line, and the bee-keeping business can be no exception to the general rule. In a letter to this journal some time ago, Mr. David Raitt warned bee-keepers to "stir up" and "push things" if they were to compete successfully with the enormous inflow of foreign honey. There can be no doubt that foreign competition will be felt still more keenly in the future, the ever increasing facilities for cheap and rapid ocean transit will enable the foreigner to land his honey on our shores at still lower prices. If we are to hold our own in the struggle we must neglect nothing that is likely to enable us to increase our surplus from every stock in the apiary. At present in every apiary there are always some stocks that give far better results than any of the others, perhaps to the extent of 50 per cent. more surplus. There would be a great gain if we could so manage our colonies that we might ensure such stocks being the rule, rather than the exception.

The splendid results from these "best" stocks cannot be altogether credited to the prolificness of the queens heading them, but rather that, owing to a combination of favourable circumstances such queens were enabled to display their powers at the right time—before the season opened.

If we are to have the best average results, we must ensure that, along with plenty of stores, every stock goes into winter quarters with an immense population of young bees, that will not die off in spring until they have reared up such large numbers of young that success will be certain. That this is seldom the case shows that the present system of management is not perfect. Mr. Rymer has proved that a queen is quite able to fill twenty "Standard" frames with brood; while we allow her only ten to twelve frames. Need we wonder that the swarming nuisance is so hard to combat. There is room for reform here.

But to allow a queen breeding room to the extent of twenty frames while honey was coming in would react unfavourably on the surplus, for the immense quantity of brood would consume a substantial amount of the honey which would otherwise have gone into the supers. If we take full advantage of the prolificness of our queens our stocks will go into winter quarters in ideal condition; but, on the other hand, this excessive brood-rearing would prove disastrous to all hopes of a heavy crop of surplus honey. By our present system of limiting brood-production we get fairly good crops of honey, but to secure it our stocks have to be forced on by stimulating to "boiling" point, from which they gradually dwindle down until they go into winter in the usual unsatisfactory condition.

It seems rather difficult to reconcile these two extremes. Perhaps the following extract from "A Modern Bee Farm" may help towards a solution of the problem. Mr. Simmins says, "Only a combined system of dividing and uniting . . . . will ever give results equal to the resources of a district." The ideal method, when it comes, will be worked on the above lines, and when we have made it a success, and can regard it as an essential part of our general management, modern bee-keeping will be more worthy of the name.—J. M. E., *Ussie Valley, Cononbridge.*

RE-QUEENING FOR THE HEATHER.

[4979.] In reply to your correspondents, "Luke Collinge," who wrote on page 465, and "J. M. E." (page 476), I still maintain that a second-season queen is more prolific than one hatched and fertilised just before the honey-flow commences I am aware that a young queen acts as a stimulus to the bees, and the bees are thus more inclined to enter the supers, but the object of re-queening before the heather-flow is to keep the brood-nest replenished with brood and eggs instead of honey, and my contention is that a second-season queen would effect this purpose better than a younger one. I am quite open to conviction otherwise, but I merely stated my own experience in the matter. The idea appeared to me to be one of the best means of obtaining heather honey, and I strongly favour it. At the same time, the results have not come up to my expectation. Possibly the seasons have not been favourable for the production of heather honey in this district for some years, which may account for my failure.

I can entirely exonerate "Luke Collinge" from having used crude carbolic acid in my apiary, for he has never examined my hives in the capacity of expert, although I am pleased to have made his acquaintance. Further, in reply to Mr. G. M. Saunders, I reside in Lancashire, so that my remarks re use of crude carbolic acid as a cure for foul brood do not apply to the expert for Cumberland. At the same time I strongly disapprove of the use of crude carbolic acid at all; the idea of its evaporating is, I believe, more imaginary than real.—HEATHER HONEY, *Hawkshead, Lancs, December 6.*

SIR JAMES SAWYER ON HONEY.

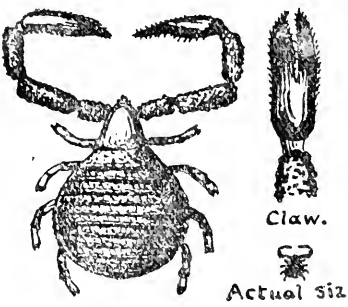
Sir James Sawyer presided at a lecture delivered at the University, given under the auspices of the Midland Pharmaceutical Association, on December 1, by Mr. H. S. Shorthouse, on the subject of "Scientific Bee-Culture." To Sir James the subject of bee-culture and honey is a congenial subject, and he delights to extol their virtues. Since he last spoke on the subject, he said, he had been extending his experiences with regard to the remedial and other uses of honey. In honey they might be quite sure they had that which was useful as a demulcent—something which suffices and soothes when taken at the mouth; that which was useful as an emollient—a preparation which, applied to an irritating surface of the body, would promote its healing; that which was a valuable nutrient—a means of supplying a peculiar form of sugar in a condition ready for immediate digestion, and for immediate application to the nutrition of the body in the building up of tissues and the maintenance of the body; and finally, in honey they would find that which was a very valuable evacuant—something which, taken into the body, would promote the discharge of noxious matter. Mr. Shorthouse's lecture, which was lavishly illustrated with lantern slides, dealt with the whole subject of bee-culture in a thoroughly comprehensive and intelligent manner, right from the infancy of the subject up to the present day with its scientific and advanced methods. At the close he was cordially thanked.—(*Communicated.*)

Notices to Correspondents & Inquirers.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

J. F. O., (Cape Colony, S.A.).—*Insect Nomenclature—Chelifer cancroides.*—Referring to the above, our contributor, Mr. F. L. Sladen, says:—"The little animal sent is a species of *Chelifer*. It is similar to the one from South Africa you sent me in March, 1899, which was described and figured in the BRITISH BEE JOURNAL, vol. xxvii, page 126. It is not, strictly speaking, an insect, for it has more than six legs, and it is possessed of claws like a crab or scorpion, to which class of creatures it is allied. Mr. R. J. Pocock, of the British Museum, to whom the accompanying sketch of the creature was sent, made the following reply:—

'The sketch you sent this morning represents what I believe to be an undescribed species of *Chelifer*. The chelifers constitute an order of Arachnida allied to spiders, scorpions, mites, &c. We have a few specimens of this species in the Museum, which came some years back from Natal. The trick of catching hold of the bee's legs is common to all the species of the group. Our English species, *C. cancroides*, for example, as well as other genera of the same group, may often be found hanging on to the legs of flies and *Tipulæ*; others again, in South America and elsewhere, get under the elytra of large beetles. The



reason for the habit is unknown, though perhaps it may be connected with the feeding habits of the chelifers, which devour mites and other small insect-like animals. I should say that they would inflict no damage upon the bees. They might conceivably destroy the eggs, but I do not think it likely. If they infest the hives it is most likely in quest of parasitic mites and ticks.'"

G. F. G. (Londonderry).—*Extracting Thick Honey from Standard Size Combs.*—We can only advise keeping the combs in a warm room for a day or two before using the extractor, and being very careful in uncapping, using a very keen-edged knife to avoid breaking the cell-walls. If this is done, the honey can certainly be made to leave the combs by revolving the cage at a sufficiently rapid speed. The fact of the combs being wired will prevent breakage. We have personally had to extract honey as thick as any we ever saw, and never yet failed in clearing the combs fairly well with the help of a geared extractor.

BANTJES, WEBSTER, & BANTJES (Transvaal, S. Africa).—*Bee Farming and Appliance-Dealing in S. Africa.*—Not being dealers in bee-appliances, either wholesale or retail, we can only refer you to our leading advertisers, who will, no doubt, be pleased to negotiate with you regarding the manufacture and shipment of bee-goods if a satisfactory arrangement is made.

J. B. P. (Newport, Mon.).—*Bee-keeping in Egypt.*—An interesting article on "Bee-keeping in Egypt," dated from the place you are going to (Cairo), appeared in our monthly, the *B.K. Record*, some time ago, and can be had from this office for 2½d. in stamps.

*** *Several lengthy letters—already in type—are unavoidably held over till next week.*

Editorial, Notices, &c.

NOTICE TO READERS.

Owing to Christmas-day falling on Thursday next week, we shall be compelled to go to press on Tuesday, the 23rd inst., a day earlier than usual. This change is necessary in order to meet the requirements of our wholesale agents in London and in the chief provincial towns, who must perforce deliver to "the trade" on the 23rd inst. We will therefore be much obliged if correspondents will post all communications for insertion in next week's issue not later than Saturday, the 20th, or to reach us on Monday, the 22nd.

MODERN BEE-KEEPING.

A HANDBOOK FOR COTTAGERS.

Referring to the new edition of the above-named hand-book not being prepared for press, we are requested to say that the editors are willing to advertise in the forthcoming edition the names and addresses of working experts and lecturers in bee-keeping for the nominal sum of 2s. 6d. each. As beginners in apiculture are often needing assistance, it is advisable for experts not to let slip this opportunity of making their names public. Particulars, with postal order, to be sent to Mr. E. H. Young, Sec, B.B.K.A., 12, Hanover-square, London, without delay.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of November, 1902, was £761.—*From a return furnished to the* BRITISH BEE JOURNAL *by the Statistical Office, H.M. Customs.*

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

**** In order to facilitate reference, Correspondents, when speaking of any letter or query previously inserted, will oblige by mentioning the number of the letter as well as the page on which it appears.*

NOTES BY THE WAY.

[4980.] As one pens the last "Notes" of each succeeding year, a feeling of sadness somehow invades the thoughts, and a retrospect will force itself on the mind, bringing back memories of the joyous hopes and anticipations which the year at its birth engendered; and now, as we draw towards its close, we know how far those hopes have been realised in our own craft. We have had many disappointments; the rosy hues of hope in spring have not materialised, the realisation has not been commensurate with our anticipations; yet, notwithstanding these shortcomings, we bee-keepers as a body have much to be thankful for. Our cup may not have been filled to the brim, but we have not been sent empty away; some of the bounties from the cornucopia of Nature have been secured, and, as is usually the case every year, some of us have received a greater share than others. For this the more fortunate ones are, we trust, thankful, but, let us hope, not in any sense boastful; and, with the sanguineness inseparable from bee-keeping, we again look forward and wish our craft general success another season.

Scarecrows.—The past week of severe frost has brought large numbers of pigeons into our district; these depredators on the farmers' "greenstuff," from turnip-tops to the *hearts* of the sainfoin plants, are also the enemies of the bee-keeper. A neighbour farmer (who is also a bee-keeper) has protected his sainfoin fields with a few "scarecrows," and the pigeons have not troubled him since.

Wide Top Bars.—Referring to the letter of Mr. James Lee (4977, page 497), in which he mentions having used wide top-bars for twenty-five or thirty years, let me say I have some old frames a full inch wide, with projecting wood pins or pegs as distance keepers, which frames were made in the late seventies, at the time when crown-boards were in general use; the said crown boards had openings by which the bees reached the supers. I have also a sectional super of that date, with sections 2 in. wide, the line of wax in centre of each section, and the whole papered together, with glass at each end, no bottoms to the sections of super, so that it was simply an inverted lidless box, formed of strips of wood about 2 in. wide, and, when filled, the paper outside could be easily cut through, so that the combs of honey could be sold separately. Then came Mr. Lee's "Crystal Palace" super, with strips of wood to draw out to give the bees access to another super placed on the top of the other. I do not *pose* as one of the "old guard," though I well remember the letters of Mr. C. N. Abbott and others in the *English Mechanic* preparatory to his starting the BEE JOURNAL. I also remember I hived my first swarm of bees on Thanksgiving-day for Peace in June, 1856.

As regards propolisation of the wide wood end of "Abbott's Pattern" top-bar, I have nothing to complain of—in fact, with chamfered wood "runners" I get very little propolisation, as they fit so well that the bees have no need to use propolis, there being no crevices left for them to fill. I have a few hives with metal ends, which are very much more bedaubed with propolis than the wood ends of "Abbott's Pattern."

Interchangeability was the aim of the

"Standard" frame, and this has so much in its favour from so many points of view that he would be a bold man who ran a tilt against it. But there are no conveniences on this mundane sphere but has its failings, and weakness is one of the "failings" of the top-bar of the "Standard" frame. Then another and still greater is the opportunity it gives of spreading foul brood by robbing one stock to replenish the stores of another; thus "interchangeability" is not always advisable. Where the apiary is healthy the advantage of giving a comb of food to a needy stock is a boon to the busy bee-keeper, but if any traces of disease is existent the risk of spreading it to healthy stocks is very great; far better give a cake of candy or a bottle of syrup. I endorse what your correspondent "S. P. S." says (on page 496) *re* Abbott's double groove and wedge in fixing foundation. I also agree with what he says as to Mr. Berry's fine "heather aroma" to his (Mr. B.'s) wax. I may add that to my knowledge it has been the *aroma* which has secured first honours to friend Berry's wax; other samples have been superior (perhaps only slightly), but they were lacking in that full aroma which tickles the olfactory nerves of the judges and decides the contest.

"*Shook Swarms.*"—What are called "shook swarms" seem a current topic amongst our American cousins. They have tried swarm-catchers and self-hivers, but have found them wanting in practical utility. Now they are jubilant over "shook swarms." These, when made at the *right* time, are to prevent natural swarming, clear out foul brood, increase the "take" of both honey and wax, and enable the apiarist to manage more hives. One enthusiast thinks an apiary for each day in the week (except Sunday) will be possible. This system, if our honey-flow was of longer duration, would meet the demand of "J. M. E." (4978, page 499). We must also be up and doing, or we shall be ousted in our own market. I notice in the American Bee Journals that the Irish Bee-keepers' Association have established a honey depot in Dublin, for the disposal of Irish honey to the advantage of Irish bee-keepers. Can any one give particulars of the scheme and the good work it is doing?

Before I write *finis* to my 1902 notes, allow me to wish every bee-keeper a joyous time at the glad festival; may all our past differences be forgotten, and may a bright Christmastide of goodwill herald in a Happy New Year.—W. Woodley, *Beedon, Newbury.*

WANTED, A FRAME.

THE FRAME FOUND.

[4981.] The publication of my letter (4950, on page 463) seems to have aroused some interest, judging from the number of communications relative thereto which have reached me. One correspondent says he can do with 500 such frames, provided price is not more than 25 per cent. above that of the ordinary frame; his proviso can be met, and the disposal of at least 1,000 of them is in sight.

Another correspondent, hailing from Swindon (who says he does not know whether I am a mechanic or a gentleman—Poser No. 1), condemns "the present top-bar with the slot, as you can always see the wax-moth concealed in it" (Poser No. 2), and holds up his hand for a broad-shouldered frame of a sort that one rarely, and fortunately, meets with. The only illustration I can find of such a top-bar is in an old Howard catalogue (which I think is quite a dozen years old), where, on page 26, it is figured in connection with the "Stirling" super. This gentleman—no, he says he is a mechanic—makes his own frames and his hives out of "Quaker Oats" boxes. I should be inclined to retort: "Nasty frames in nasty hives." The frames I could not tolerate, but bass is, in my opinion, most unsuitable wood for hive making; but, as my correspondent says, "I know I am on the right track, and I believe every word you said in the B.B.J." (two statements that are not on speaking terms with one another—Poser No. 3), it is perhaps waste of time to try to convince him that he might do better. He inquires where he can get a circular saw for his lathe. If such is not obtainable at a local tool shop, it can be obtained from Nurse & Co., Fleet-street, London, E.C., at 4s. 6d. for one 6 in. diameter, with a mandrel to suit for a like amount.

Another correspondent informs me that it was the late C. N. Abbott who introduced the saw-cut. If so, I will withdraw my remarks concerning its inventor (?), as it would only be impertinence to speak thus of one who did so much for the advancement of bee-keeping. My opinion, however, as to its banefulness remains unchanged. Other correspondents who have promised their support towards making my suggested frame a commercial possibility are cordially thanked, and are referred to the firm mentioned later on. I am not an appliance dealer, and do not propose, at present at least, to compete with those who are.

From the British "Weed" Factory at Holme comes a catalogue, and my attention is drawn to the "A 19" frame, with top bar $\frac{7}{8}$ in. by $\frac{1}{2}$ in, ears reduced to $\frac{3}{4}$ in. by $\frac{3}{8}$ in., underside grooved for foundation, price 9s. per hundred; and from Burton comes an intimation that it is in contemplation to put on the market next year a frame with $\frac{3}{4}$ in. grooved top bar, both it and side bars being $1\frac{1}{16}$ in. wide. Now, neither of these, whilst they are advances upon the "regulation" frame, are good enough to permit me to substitute either for the "wanted" frame, and I should advise him of Burton to go slow with that wide side bar. I don't think *I* want it.

Away down somewhere in "the wild and

woolly West" is a place which may, with a little search, be discovered on any map of England. It is known as Exeter. In Exeter is a street yclept "Guinea," and Nos. 10 and 11 of that street comprise the business premises of J. T. Burgess & Son, who are described on the cover of a neat, well-printed catalogue of thirty-two pages—a copy of which has been forwarded—as "inventors and manufacturers of the most 'up-to-date' beehives and appliances." A peep inside the cover does not belie the external description, for therein are illustrated hives made with "never a plinth," and with lock-jointed—so-called dovetailed—corners, and, what I have never seen outside my own apiary—which does not say they do not exist—plinthless "W. B. C." hives, all lifts inverting and telescoping on the Sandringham principle, the best principle of hive construction, in my opinion, ever brought out. It is right—right every time, and all the time.

And accompanying the catalogue came a sample frame which, in dimensions, is exactly in accordance with those I named, except that the side bars are $\frac{1}{16}$ in. thicker. The under side of top-bar is double grooved, and provided with a wedge; and bottom and side bars are also grooved. Respecting these frames Messrs. Burgess say "... We have received many flattering testimonials from those who have used them. If the sheet of foundation is long enough to fit loosely in grooves of side bars the bees are more likely to attach same to wood. The groove in bottom bar is used to fix a wax starter, $\frac{1}{2}$ in. wide, allowing the sheet of foundation to hang clear by $\frac{1}{4}$ in.; by this method we shall more often have perfect combs built. ... We do not find the wedges fall out as mentioned by you, although we have had experience in fixing foundation in about 1,000 frames. We have sold from 10,000 to 15,000 of them, and supply them at 1s. 6d. per dozen, or 9s. 6d. per 100." In point of workmanship there is nothing wanting, and the price is *right*. The grooves inside bars may be helpful in getting combs well attached to the wood, and I am inclined to think the bottom starter business may be a good "kink." Is not Dr. Miller, one of America's largest comb-honey producers, an advocate of narrow bottom-starters in sections? He produces better-filled sections thereby; and is it not possible that the same effect would result if the principle was applied to frames? I will test it and see; but I am not convinced of the usefulness or necessity of the wedge under the top bar, and I should prefer its room to its company.

Messrs. Burgess, are you there? Get a thousand made up, omitting the wedge and the extra groove, and make the single groove a bit shallower. This should cheapen the frames by 6d. a hundred; and, if they hang on hand, I will take the balance at the end of the season. And one cannot help asking how it is that you are content to hide your light under a bushel (skep?)! It surely cannot be that you have your hands full catering to the wants of the "wild and woolly" Westerners. Even then 'tis one of 'em—a "Pharaoh that (apparently) knows not Joseph (Burgess)"—that has bespoken 500 of the new frames, so you had better remove that skep. You evidently know the *B.B.J.*, but it and its readers don't know so much of you as it might be to their and your interest to do. If any formal introduction is needed, well, here it is. And if I have earned any commission it will do at Christmas—turkey from each; slice off the breast for each who has shouted approval; bones will be picked with Messrs. Taylor and Loveday.

Mr. Taylor (4958, page 473), let me begin by offering you some sauce. You had best fill up on that, for you will get no turkey—unless there is "rhubarb" tacked on to the end of it. A good old proverb has it, "People who live in glass houses shouldn't throw stones." If my frame will not "catch on" because it has not received a dispensation from the B.B.K.A., how goes it with your "improved frame—the result of much thought and experiment" (*vide* page 43 of your list issued July 1, 1901; also page 56 of list dated February 1, 1901)? And, whilst you are about it, just turn up page 48 of T. B. Blow's catalogue dated March 1, 1894, and then tell us how it is that he and you have *dared* to put out a frame which differs from the "standard" fixed by the B.B.K.A. And you might also tell why it is that a frame which in 1894 was "patent applied for" is still in the same happy condition. Would not they let you have one because it was not "standard?" No, no, friend Taylor, your "bogie" will not do. During the slack season you might derive a little satisfaction from the perusal of the catalogues of your competitors. You would then find that nearly every one offers an "improved" frame, thereby infringing the B.B.K.A. specification which, to a dull-headed chap like myself, meaneth that said specification is not satisfactory, in fact, *I do not know of a single person who supplies frames exact to that specification.* Do you?

And either friend Taylor's mental equilibrium has been temporarily (I hope) disturbed, or else he is guilty of careless reading, for the greater part of his letter is concerned with repelling an attack that has not yet been made. Bless your heart, my dear Taylor, I run no risk of having the B.B.K.A. Council in full cry for my scalp, for I am far too well aware of the value of a "standard" size (even should I be forced to admit—which I have not—that that size is other than the best) to make any effort to overthrow it. That windmill-tilting job is still "to-let" so far as I am concerned.

Mr. Loveday, too (4957, page 473) seems afflicted with a little density in the region of the cranium, which has caused him also to

read into my letter something I did not *write* there. I object. And he appears to have jumped to the conclusion that I advocate a wider side bar. Put on your specs, Loveday.

With regard to the saw-cut, one cannot help feeling sorry that Mr. Loveday's experience—though "obtained among bee-keepers in all stations of life"—has not been wider, so that his dictum would have carried more weight. Unfortunately (in a double sense) for him, "there are others" whose horizon is not bounded by the narrow limitations that pertain to his. Whilst I have no objection to him, or any one else, preferring a top-bar with a saw-cut (or with two, if they like), I do object that any one should attempt to deny to me, and to others who feel the need of it, the provision of something better. Did I hear some one shout, "Dog in the manger?"

"With good bee-keeping, trouble from the wax-moth need not be feared through the saw-cut" is another Loveday dictum which has too strong a leaning towards the positive. If it was not for unduly flattering myself, I should like to say to my astral body, "Edwards, you're a *good* bee-keeper, and you belong rather to the stir-'em-up-often school than to the let-'em-alone clique." Yet I cannot keep clear of wax-moth, and keeping surplus combs free from their depredations is a real trouble to me. Bro. Woodley, you there? Do you have any trouble with wax-moth? You do, I know. If you are not a *bad* bee-keeper, friend Loveday must be side-tracked. But, perchance, by "trouble" he means having colonies succumb to its ravages. I will venture a guess that neither you nor I have trouble of that sort. But we both have neighbours who are not so careful as they might be. Is not that so?

And Mr. Loveday has got the wrong perspective on the wiring question, too. He says—bottom of page 473—that he agrees upon the advantages of wired combs, but plaintively adds, "But where do these advantages come in, even if a stronger frame be used *if the frame is mutilated by cutting the bars half through to let in the wire*" (italics mine). W-h-a-t? I thought I had been advocating an unmutilated frame, and that the Dymoke of mutilation hailed from Hatfield Heath! Mr. Loveday blows hot and cold in alternate breaths, and founds his arguments (?) on a basis of fallacy. He first objects to solid top-bars (which can used unmutilated if the frame is wired) and in the next paragraph lets fly against wiring because this necessitates mutilation. Man, man! What ails you? Are we to understand that you do not know how to wire a frame "without cutting the bars half through to let in the wire"?

The object of my "4950" was the arousing of sufficient interest to induce some go-ahead appliance-maker to put on the market a frame which, I am sure, only needs testing to be appreciated. The fact that nearly, if not quite, all of them even now offer an "improvement" is in itself sufficient condemnation of the specification which was long ago attached to the "Standard" frame; even the "opposition" hereinbefore dealt with admit that there is room for improvement. Mr. John Howard says in his catalogue, respecting his frames with ⅞-in. top bars, that they "always keep perfectly straight in use, and *do not drop in centre as in ⅞ in. by ⅞-in. saw-cut top bar*" (italics mine), and a wider top-bar is appreciated by brother Woodley—*vide* 4949, page 463. The need for change, then, may, I think, be accepted as self-evident; but whether or not the frame I have recommended will "fill the bill" remains to be seen. As it can be obtained, I invite all to give it a trial; and I can crib a line from friend Taylor's catalogue, and say of my improved frames, as he does of his: "ONCE TRIED, NO OTHERS WILL EVER BE USED."

And, in conclusion, I cannot resist a final dig in the Taylorian ribs by remarking that I have some of his 83a frames that are "paid off," and those that are still in commission will have to hand in their checks before they are much older. Friends Messrs. appliance dealers who don't want to be shelved as "back numbers," you had better fall into line and, without waiting for a B.B.K.A. dispensation, add "the best frame of all" to your regular stock lines, and thus help bee-keeping *and yourselves.*—H. EDWARDS, *Shrubs Hill Cottage, Sunningdale.*

(*Correspondence continued on page* 508.)

HOMES OF THE HONEY-BEE.

THE APIARIES OF OUR READERS.

It is a sign of the "go-ahead" way in which the bee-keeping of to-day is carried out when we have in our friend Mr. Wells—whose little apiary appears on next page—a bee-man who began only a couple of years ago and is now engaged in driving bees, removing ditto from house gables, and all sorts of up-to-date bee-work, besides making all his own hives. He says of himself:—

"My bee-keeping experience commenced in the year 1900. A friend of mine sold me a weak swarm and a frame hive on July 20 of that year. I removed the bees home at night, and felt proud to think I possessed a hive of bees, as I had always a liking for them. Next morning I must needs go and have a look at them by turning back the quilt, when I had to face (the music) a sharp attack from the bees, being stung on the hands, &c. This induced me to take the *Bee-keeper's Record*, as I thought it might help me, and would be enough for me to read each month. However, my mind and interest expanded, so I decided to take the BRITISH BEE JOURNAL weekly. I then purchased Mr. Cowan's 'Guide Book' and 'The Honey Bee,' and my reading of them taught me how little I

knew of the management of bees. (I had contracted the bee-fever in a most virulent form, so I was told, and the infection remains with me still.) So I fed up my stock during September, which came through the winter safely. During the next spring I purchased another stock in a frame hive, and, to my dismay, just as the honey flow commenced my first stock became queenless, probably by my awkward manipulations. My other stock yielded me 30 lb. of surplus honey—not a bad start, considering my inexperience. My reading led me on to try driving bees, so I purchased two more hives; then went into the surrounding villages, found out all the skeppists I could, and offered to drive their bees. I also gave them a trifle, according to the strength of the stocks. I managed well—thanks for seeing our expert drive bees at a local flower show—for I saved nine stocks from the sulphur-pit, strengthened my two stocks, and increased their number to four. I then joined the Essex and Suffolk Bee-keepers' Association, and I have never regretted doing so, as much valuable information is gained from a good expert. I now make my own hives to take the 'Standard' frames, some of which are seen in photo. I like to see a good alighting-board. 1902 has been a good year with me, considering the adverse weather; the three stocks I had for storing surplus honey yielded me 150 sections in ten or twelve days. From the hive seen at the end of the picture to my right I removed sixty sections, and I have disposed of them all at 1s. per section, many of them weighing 18 oz. The bicycle seen in the photo, and the skep, shows the way I convey home my driven lots of bees. I usually manage to fix two skeps, one over the other, and bind them well together, using the driving-irons for that purpose; then tying well with strong cord. I have a fascination for removing bees from the roofs of houses, and there are many such houses round here, and the bees have never been disturbed in some instances for twelve years. I have removed three such lots this year, and when driving the bees up the combs in one gable-end of a house, I noticed a large quantity of bees coming from another direction on the return end of the gable, and uniting with the bees I was driving, so that my skep was full when the task was complete.

MR. THOS. WELLS' APIARY, COLCHESTER, ESSEX.

"I afterwards found there were two lots of bees which had built their combs between the upright timbers, the connection from one to the other being by the small apertures between the laths and the upright end post. I thought it was a fine haul for me, although the occupier of the house was delighted to think he was being rid of a serious nuisance. Like most bee-keepers, I have been troubled this year with foul brood in my apiary, which I hope to stamp out by antiseptic methods. I find one cannot be too careful and cleanly about the inside and outside of the hive, taking every

precaution when examining it so as to detect the commencement of any outbreak, as an early diagnosis of the disease, with prompt treatment, will render less virulent its attack. I am afraid, Mr. Editor, you will think I am trespassing on your valuable space, but in closing I should just like to say that, owing to my bee-keeping experience, I find and see a fresh beauty in all the trees and flowers, the fields have a sweeter green; there is a sure rest for the mind and body with such a health-giving hobby—an inducement to home, with its joys and comforts—and as I watch the industrious little workers, I think of the poet's words:—

"'Let us then be up and doing,
With a heart for any fate,
Still achieving, still pursuing,
Learn to labour and to wait.'"

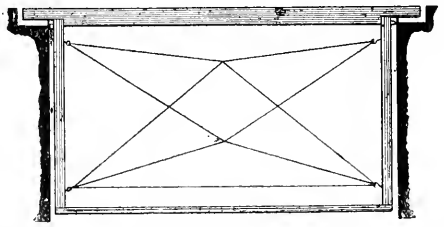
CORRESPONDENCE.

(*Continued from page* 506)

WANTED, A FRAME.

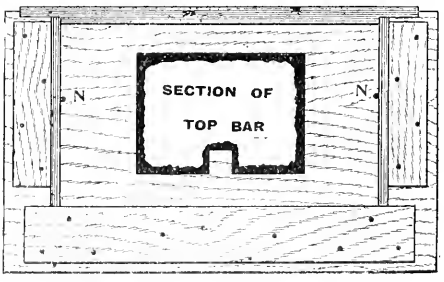
[4982.] May I be allowed to add my quota to this discussion, which appears to crop up with more or less regularity, proving to some extent that existing arrangements are not entirely satisfactory? And, as we find old hands declaiming against these, the subject cannot be dismissed out of hand, as it might be were it merely a case of new brooms desirous on their novitiate of making a "clean sweep." Whatever one's opinion of the demerits of the size of frame adopted as standard, or the undesirability of the upheaval consequent upon the change, this would seem to be irrelevant to the present discussion, which appears more concerned with the construction of the cheap "dovetail" frame in particular. *This* is *not* satisfactory. It must be admitted that the ends of the top-bars are the weakest parts of the frame proper, owing to the various slots at their junction with the frame. A top bar broken at this point should be examined for one to realise *how little* wood remains; and when one considers that these frame lugs may have to support a season's honey, or be subject to a severe strain, say, when prising a rack of sections free, it will be seen that they, at any rate, do not err on the side of strength. It is also a work of some delicacy to satisfactorily nail the top and side bars together. The saw-cut for foundation fixing is an abomination, and I should like to heartily endorse Mr. Edwards's remarks on page 463.

It does not, however, seem to me that Mr. Edwards makes out a strong case for the extreme size of top-bar he recommends. His answers to a query as to its advantages are not strong enough nor convincing enough to warrant the expenditure on the part of a majority of bee-keepers. He says (page 464):—1. "The frame tops are in the same plane." So are the "dovetail" tops, or at least those of all frames with same sized ends and solid top-bars. 2. He does not say *where* propolis is prevented. 3. He claims reduction of brace-combs and disuse of excluder zinc. A good honey-board will accomplish some of this, and may be dispensed with at will, but a deep top-bar would be "always with us," although at times it might be desirable that a queen *should* pass these, as in "doubling" or "storifying," whilst the width ($1\frac{1}{8}$ in.) would prevent a narrower spacing, and would still further *divide* the hive into compartments—one of the alleged disadvantages of section racks. I suggest, therefore, that although a *stronger* frame may be desirable, that his top-bar is too large, and enclose a sketch of my own frame, which is somewhat similar



to that of Mr. Edwards, having a groove for foundation, but with the top-bar $\frac{7}{8}$ in. by $\frac{5}{8}$ in. deep, the side bars $\frac{7}{8}$ in. by $\frac{3}{8}$ in. The top-bar is, however, as will be seen, only $16\frac{1}{2}$ in. long; the bee-way being obtained by a staple in each side-bar. The foundation is merely inserted in the groove, but is thoroughly wired by Mr. W. B. Webster's method, except that the horizontal wire is placed at the bottom of the sheet, instead of at the top. The most perfect combs result. They are *well* worth the slight extra trouble of this method. I may say that I have had beautiful worker combs built over this wiring from starters only! The frame, it will be seen, is largely a combination of the good points of various others.

I may say that the cost of these frames, machine-made, locally, is about the same as the Dovetail in one gross lots. The "jig" required for their assembling is of very simple



N N—Headless nails to hold side-bars.

construction. I enclose a sketch. As will be seen, it consists of a base to which three cleats are attached by screws, the dots representing the screw-heads. A couple of headless wire nails, N N, serve to hold the side bars

in check whilst the top-bar is being nailed to them, as shown; the frame is then inverted to secure the bottom bar.

One of the strongest frames I have seen was that made by Mr. Horsley, of Douglas. These had small triangular blocks firmly glued into the internal angles, and were very well made. Some bee-men seem willing to take extra trouble to have their furniture "just right" even in these commercial days.

These frames were, however, larger than the standard size, being for experimental purposes—16 in. by 10 in.

May I, in this connection, suggest a system of working which may have its advantages with the "Standard" frame, if this is not over-burdened with top-bar? It *is* possible that a prolific queen, or even an ordinary queen in a good locality, may be crowded by the "Standard" frame, and non-swarming chambers have been devised as a safety-valve to such colonies. The system of working these is, however, not infallible, as the bees will often swarm without occupying them, and the method recommended in all seriousness demands the destruction of brood found in them! If it were possible to ensure their occupation, with an *extension* of the brood-nest where desired, there would be a distinct gain in their usefulness.

My method does not suggest the use of the N.S. chamber until the bees have begun to work above, but the brood-nest is allowed to become fairly crowded in spring, when a set of shallow-frames is given above without excluder of any kind. These frames may contain worked-out combs and "starters," but *worker comb and brood is aimed at.*

Should drone comb be built upon the starters, it should be reduced to desired limits or full sheets of foundation substituted; the partly-built combs being utilised upon similar, but more backward, stocks. When the upper story is well tenanted, or drone comb is begun, the shallow-frames are to be put BELOW the brood-nest proper; the condition of these frames and the approach of the honey-flow regulating the operation. A surplus-chamber is now placed above an excluder, preferably a set of shallow frames with full sheets of drone-foundation, or sections may be given as desired, the bees being already in the habit of working above the standard brood-frames. If it be desired later on to reduce the brood-nest, the shallow-frames containing brood are easily disposed of in nuclei; to strengthen, or form other colonies, for queen-rearing in upper stories, &c.

The standard brood-frames of the stock will then very likely contain as much crowded brood as an investing frame could show.

This would seem to be something of a contribution to a non-swarming system, but the suggestion is formulated with an eye to what is really a larger comb, where the standard size is found too small for the particular colony or locality, whilst retaining the advantages of a standard, without loss to the colony, as if those "shallow brood-frames" are not adopted as such, they simply qualify for the extractor.—L. S. CRAWSHAW, *Burnside, Ilkley, November* 29.

HEATHER HONEY,

AND HONIES IN GENERAL FOR MARKET.

[4983.] It is not always that we North Country men get "pasture" in the B.B.J. suited to our locality, but of late the excellent contributions by Mr. Lancelot Quayle, I. O. Man, "D. M. M.," *Banff*, and "Ellis," Conon Bridge, are calculated to suit all who dwell in "Heathland" or its proximity. Then the different sources of the precious nectar has come in for review.

Firstly, as to the heather and the honey from such. I do not know that I can add much to profit the craft, but we here agree that the bell heather (*Erica cinerea*) is of little value, and is frequented by the bees only when there is a dearth of other supplies. The bell heather, of course, blooms in advance of our common heather (or ling), but I think it is agreed the colour is dark and consistency poor. Indeed, Mr. L. Quayle himself bears this out. Last year we had a consignment of sections of beautiful heather honey from the Pitlochry district—which is the best in Scotland—but it was so dark and thin (as if unripe), we were glad to see the last of it. It would seem that the same had been gathered from the bell heather—or else some unusual source had been tapped—but the aroma, &c., was all right.

The Isle of Man quality is good in aroma and colour (when granulated) but, *of course*, far removed from our idea of a honey with *body* in it, such as you could stand a pencil in and the latter remain bolt upright. Yet where ours might prove too strong for the delicate taste, the milder southern quality would nicely "fill the bill."

In writing about honey, however, I would fain diverge from the subject of *quality* to honey gathering, and observe, just by the way, that, in a year like the past one, we proved how great the value of some or all of the sections, to be brought out and extracted here immediately previous to going ten miles up the glen. Also we disproved the idea of lifting the full or well-on-the-way section-rack at the moors and slipping an empty one under. It is the other way about to secure success; and besides being colder in August and September, the bees will not have interference with their own little plans. Returning, though, to the question of honey, perhaps some of our more scientific men will give us some help *re* the apparent more rapid granulation of honey in the comb, where two or three sources of supply are available at one time? Is there likely to be a chemical action tending to quicker granulation, where, say, clover and raspberry

honey is stored in the same cell? or when there is a glut of honey are the workers inclined to seal up too quickly, and so tend to bring about granulation prematurely? Handling, as we do, large quantities of comb honey and storing same safely in a warm, dry place, we still have the difficulty, often, of the aforesaid grievance.

Lastly. How is it some firms not connected with bees or bee-supplies are turning out tons of honey and selling same against genuine local stuff? I affirm such is a source of danger to smaller bee-men, and it is time it was tackled. I assume cheap lots are bought up and all blended or "selected," as they say, and then put up in "out-of-the-usual-style" of jars, Greek, &c. I see no need to be scared, but would say let those who can give us help to effectually deal with the problem use the columns of the B.J. for the common good.

Pity we could not have more of those articles quoted from *Gleanings* regarding marketing of honey. How many producers, for instance, take the trouble to warm honey —say, a dry heat—to 160 deg. Fahr., when the chances are it will not granulate on the grocer's shelf for months. if at all? Again, do not let us stick to the stereotyped glass jars or bottles. Let us be ingenious. For instance, we are having quite a run in sixpenny glass "tumblers" of honey, which hold about 6½ oz., and these are corked and tinfoiled, and are certainly attractive, to say nothing of the usefulness of the empty tumbler!

Buying such at 10s. to 11s. per gross, wads ⅜ in. thick at 4s. per gross, and tinfoil at 2s. per lb., cut out in circular form ready for use, I say, ladies and gentlemen, we can command a paying trade.—D. RAITT, *Blairgowrie, N.B., December* 13.

BEES IN NORTHAMPTONSHIRE.

EXPERIENCES OF A NOVICE IN 1902.

[4984.] I thought perhaps my experiences in this generally bad year might be of some interest to your readers. I am a novice in bee-keeping, this being my second year, and last season my time was occupied in transferring bees from skeps to frame-hives; and though I did have a little surplus, it was not looked for or expected. I went into winter quarters last year with fourteen stocks. You will say a large number for a beginner, but I am an idle man, and can devote myself entirely to my bees; besides which I wanted to experiment, and in doing so there is always a chance of loss. I had made up my mind to work for extracted honey, and my hives were as follows:—Four fifteen-frame hives, four twelve-frame hives, and the rest ten-frame. Out of the fourteen stocks three were made up of driven bees, eight skeps, fed up in the autumn. The daily examination of my hives showed me that these, then, were weaker than any of the others, owing, of course, to no late-hatched bees being present. With slow feeding they all came on nicely, but the weather was most unfavourable, the hives were soon empty of winter stores, but as I kept the feeders on they continued to breed, with the result that I had in some of the larger hives twelve frames of brood, not patches of brood, but right up to the top bar. The expert on seeing them said he had never seen such a sight as some of the frames. I continued to feed, and from my note-book I find I supered the last of the eleven hives from which I was going to extract on June 21. I did not use excluder, which perhaps was wrong, but placed a piece of oil-cloth over the middle eight frames in the fifteen frame hives, and in the middle five frames in the twelve frames, and then put my shallow-frame super on. Of course I had no drawn out shallow frames, so used half-sheets of foundation. The enormous populations soon drew this out for me and added drone cells to fill up. On examination one day I found one queen up and laying in these drone cells. I drove her down with a few puffs of tobacco smoke, cut out the strips of brood, and had no more trouble, on July 1 extracted for the first time 182¾ lb. I only used the one super of shallow frames, removing those which were capped over, extracting and returning the wet comb—again, I suppose, bad practice, but with me successful. On July 11 I had to extract again, this time 276¾ lb., and again on August 1 191¾ lb, making a total of 651¼ lb. from eleven hives, all from the supers. I could have taken some frames from the body-boxes no doubt, but refrained. This gives me an average of just over 59 lb. per hive for the eleven, and for a bad year I must be satisfied. I also increased my stock to eighteen, which I have shut down for winter with ample stores, and no feeding or candy wanted. The quality of candy is, I suppose, good, as I exhibited it on three occasions, and was awarded 1st prize on each occasion, and also the B.B.K.A. bronze medal at the Warwickshire B.K.A. Show for the best exhibition of extracted honey, not exceeding 50 lb. The knowledge I have derived is as follows:—One super of shallow frames is ample if extracted as they become full; queen excluder not a necessity; and fifteen frame-hives a great advantage over smaller ones for extracting purposes. My four fifteen frame hives gave me 122½ lb., 87 lb., 85½ lb. and 75 lb. respectively, against 61¼ lb., the best of the twelve frame ones. This autumn I imported some Italian queens, and I intend in the coming season to turn my entire apiary into Italians, and as there are no bees near I hope to keep them pure. If you think my experience in this direction will be of interest to your readers I will write you again next year. I enclose you a balance-sheet, which you can either publish or not, showing that a novice in South Northants has

made a profit in this generally bad year. The selling of honey is the point I have not yet mastered, as what I have sold has not averaged more than 6½d., which seems to me a very low price for a year of shortage, and I still have honey left. I must conclude by saying that I am greatly indebted for what I am pleased to call my success to our local expert and to your excellent paper, and I think I may fairly say I know the "Guide Book" backwards, and if I do not always follow its advice, why it is my fault if I come to misfortune. Another publication which I consider of the greatest use is the "A.B.C. of Bee-Culture."

BALANCE-SHEET, 1902.

Dr.			
By plant as per inventory, Jan. 1, 1902	£11	14	0
Paid for food and foundation ...	2	19	6
„ new plant	7	1	7
„ new stock	1	5	0
Labour and sundry expenses ...	1	15	0
	£24	15	1
Balance	18	11	5½
	£43	6	6½
Cr.			
By plant in stock this date, less 10 per cent	£20	9	2
By honey in stock	5	0	0
Received for honey	16	7	4½
Received for sundries	1	10	0
	£43	6	6½

—A NOVICE, *S. Northamptonshire, December* 13.

Obituary.

THE REV. J. F. BUCKLER.

We deeply regret to record the death of the above-named gentleman, who was for over twenty years past one of the most active and enthusiastic promoters of the bee-industry in the North of England. Ever since he became Rector of Bidston, Cheshire, in 1881 Mr. Buckler was unceasing and constant in his support of bee-craft among his parishioners; and when, in 1884, he became associated with ourselves on the Executive Committee of the Lancashire and Cheshire B.K.A, which was then in its third year of operations, it was the beginning of joint labours in the cause of bee-keeping which never afterwards slackened. Mr. Buckler subsequently became Chairman of the L. and C. B.K.A., and was rarely, if ever, absent from its meetings.

He also very frequently officiated as judge of the bee department at important shows in the north, and has officiated in the same capacity at the "Royal" show, besides being many times appointed an examiner of candidates for the certificates of the B.B.K.A.

When the dual County Association of Lancashire and Cheshire a few years ago decided to separate and have an Association for each county, Mr. Buckler was unanimously appointed Chairman of the Cheshire B.K.A., and held the office ever since. Indeed, his loss will be severely felt by Cheshire bee-keepers, among whom his genial urbanity and tactful chairmanship was highly appreciated.

The news of his decease reached this country by cable from Las Palmas, whither it was deemed advisable that he should winter owing to failing health, but he had only reached the Canaries when his illness took a serious turn, resulting fatally on Thursday, December 4.

On behalf of bee-keepers generally, but especially of those who, along with ourselves, were co-workers with Mr. Buckler in labouring for the good of the bee-industry, we tender sincere and heartfelt sympathy to his family under their sad bereavement.

DR. A. B. MASON.

We gathered from the *American Bee Journal* of the 4th inst. the sad news of the untimely death of the above well-known American bee-keeper, through an explosion caused by the escape of natural gas from a stove in the summer kitchen of his house, on October 30. It seems Dr. Mason had entered the room with a lighted lamp and an explosion followed. Though badly burned about the head, face, and hands, the doctor for a few days seemed in a fair way of recovery, but owing to his advanced years, he could not overcome the nervous shock to the system, and died on November 12 at his residence, Toledo, Ohio, U.S.A.

We are indebted to the *American Bee Journal* for the following particulars concerning the deceased gentleman, and we tender on behalf of all British bee-keepers our respectful sympathy to his sorrowing family for the loss of one who is regarded very highly in this country as a "Father" of the craft, whose memory will be cherished in the long years to come:—

"Dr. Mason was born in Erie Co., N.Y., in 1833, and was raised on a farm. When seventeen years old he taught school, and then attended Beloit College, Wis, for several terms. He then began the study of medicine, and attended lectures at the University of Michigan in 1857 and 1858. But the practice of medicine was not to his taste, and, having studied dentistry in connection with medicine, he adopted the dental profession, and continued to practise it throughout his whole life. In 1862 he moved to Waterloo, Iowa, and was President of the Northern Iowa Dental Association for two years.

Dr. Mason was prominently active in religious work. He united with the Baptist church when eighteen years of age, and filled different offices in the church. At one time he was a church clerk, a trustee, and clerk of the board of trustees, besides being a

Sunday-school superintendent. In Sunday-school work he was prominent, his activity extending to neighbouring counties.

His interest in bee-keeping began in 1869, and from that time his interest increased as the number of his colonies increased, until in 1873 he made his bees an important source of revenue, severe attacks of rheumatism making close confinement to office work objectionable.

He was well known as prominent in apicultural matters in Ohio, to which State he moved in 1874, locating in the vicinity of Toledo. In 1882 his apiary was infected with foul brood, but he succeeded in curing it so effectually that there was no return of the disease.

He was the leading spirit in securing prominence for apiculture at the Tri-State Fair, which was held yearly at Toledo, and was the efficient superintendent of that department. He was also superintendent of the Apiarian Department of the Ohio Centennial Exposition, which took place at Columbus in 1888.

In 1887 he was elected President of the National Bee-keepers' Association (known by another name at that time), to which office he was re-elected the following year. For the past seven years he has been secretary of the same body, and occupied that position at the time of his death, his term expiring with the end of this year.

Dr. Mason was a man of fine appearance and commanding presence, and was always a conspicuous figure at the national conventions, his jovial manner always adding interest to the meetings."

Queries and Replies.

[3009.] *Removing Bees from Trees.*—I am writing to ask advice under the following circumstances:—On December 12 I was helping to take down a dead beech tree. One of the large branches was hollow; in it was found a bees' nest with a lot of bees and combs, but not much honey. Much of the latter got spoilt in the tree falling. I secured the bees and comb, and on reaching home secured combs in bar-frames by tape, and then put bees in a frame-hive. I examined them to-day (December 14). I am afraid queen is killed. I therefore ask—Will bees live till spring? I have put hive in a warm shed. What I propose to do is to feed bees with warm syrup as long as mild weather lasts, then put on soft candy. I will examine as early as possible in spring. If found queenless, will either unite the bees to another stock, or put in a frame of brood and eggs from another hive. I may say that I have your valuable "Guide Book," and am also a regular reader of BEE JOURNAL; indeed, all I have learnt of bees has been gathered from those two sources. Hoping that I am not troubling you too much.—A YOUNG BEGINNER, *East Dereham, December* 14.

REPLY.—We should like to know why you are afraid the bees are queenless. If, however, your assumption is correct there is nothing for it but carrying out the course proposed for utilising the bees by uniting them to another stock.

[3010.] *Amount of Food for Winter.*—I am writing to ask you if you think that my bees (I have only one hive) have enough food for winter? I fed them up in September, and on the 25th of that month examined the hive and found that it contained about four and a half frames ("Standard" size) of syrup food; some of it sealed and some unsealed. I then gave the bees another 5 lb. more of sugar made into syrup, and packed the hive for the winter on October 6, putting a 2-lb. cake of candy on top of the frames. This morning (December 14) being very mild and many of the bees flying, I looked beneath the quilts and found that about three-quarters of the candy had disappeared, and so feel rather anxious lest they should be coming to the end of their stores. Do you think that the bees have enough food below to last till March, or had I better open the hive on a mild day and give them more candy?—"B.," *co. Durham, December* 14.

REPLY.—The fact of candy being consumed is rather indicative of the good condition of the bees than a sign of stores being consumed. There will be ample stores to carry the bees on to February next, when another cake of candy may be given.

Notices to Correspondents & Inquirers.

Letters or queries asking for addresses of manufacturers or correspondents, or where appliances can be purchased, or replies giving such information, can only be inserted as advertisements. The space devoted to letters, queries, and replies is meant for the general good of bee-keepers, and not for advertisements. We wish our Correspondents to bear in mind that, as it is necessary for us to go to press in advance of the date of issue, queries cannot always be replied to in the issue immediately following the receipt of their communications.

All queries forwarded will be attended to, and those only of personal interest will be answered in this column.

C. T. E. (Oxon).—*Candy Making.*—No. 1 (honey and sugar) is of good grain and consistency, being smooth and "buttery." It is a good candy. No. 2 (sugar only), though fairly good, is a good way behind No. 1 in quality.

Honey Samples.

J. C. (Belfast).—Honey sent is poor in quality and thin in consistency. Though beginning to granulate, it is not well ripened, and in consequence is not likely to keep well.

S. E. L. E. D. (Staffs.).—Honey is excellent in colour and flavour; almost wholly from white clover. It is a very good sample.

*** *Some Letters and Queries are unavoidably held over till next week.*

Editorial, Notices, &c.

A CLOSING LINE FOR VOL. XXX.

The fact of our final issue for 1902 requiring to be in the hands of readers a day earlier than usual enables us, in penning a closing line for Vol. XXX., to express our cordial good wishes for a happy Christmas-time to all readers of the BRITISH BEE JOURNAL, and a sincere hope that the coming year may, in all respects, improve on that now ending. It has been a stressful year for the dwellers in this land as a whole; and the industry we represent has had perhaps more than its share of the strain, both individually and collectively, but bee-keepers—ourselves included—are full of hope that the specially adverse items of the year's labours are items that do not crop up very often. Bad years will come round, as will brighter ones, and we feel that our own hope will be shared that 1903 opens out a prospect of better times for all.

INTERNATIONAL EXHIBITION.

We are requested to announce that the above exhibition will be arranged and organised by the "Central Association of Austrian Bee-keepers," which is the largest and most important bee-keeping association in that kingdom.

The exhibition will be held in the Floral Rooms of the Imperial Horticultural Association, Vienna, from April 4 to April 26, 1903.

Foreigners are invited to exhibit, the main object being to demonstrate the present state of apiculture in all civilised countries.

The apicultural display will be divided into the following groups .—1. Live bees ; 2. Beehives ; 3. Appliances ; 4. Bee products ; 5. Artificial products ; 6. Teaching and literature ; 7. Machines ; 8. Special bee-houses.

Forms of entry and further information may be obtained from the "Central Association for Bee-keeping in Austria," Schauflergasse 6, Wien I.

Correspondence.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

COMMENTS ON CURRENT TOPICS.

"THE WRATHFUL BEE."

[4985.] Every year we hear of some story being circulated far and wide regarding the wrath of the bee; always to its detriment, and with all extenuating circumstances carefully suppressed. One year it is a horse who has such a strange fascination for standing, like a country bumpkin, with its mouth so wide open that it actually allows a whole swarm of bees to enter—with the inevitable result that the horse ceases to be a horse, and becomes "clay." Any one acquainted with horses would at once say that physically the performance was an impossible one; and even among the uninitiated I never met a single person who believed in anything but a fictional origin for the tale. Last year it was widely reported that a whole flock of sheep were chased for miles, and numbers of them cruelly stung to death by bees. On tracing the history of the story away back to its source, the number dwindled down, and ultimately it resolved itself into the bald fact that a shepherd, his dog, and three sheep had been badly stung by *wasps*. The young dog had pawed at a wasp's byke while the shepherd was asleep near by. My informant adds: Bees were not kept within three miles of the spot! Just the other day our northern papers were circulating a story regarding a dog which had been stung to death "near Holme." It contained a modicum of truth, but the implication that the bees were the guilty parties scarcely does them justice, as I am credibly informed on the very best authority that they were not the aggressors, and that the cause of offence had its origin on the other side. Mankind, too, at times becomes a victim, but only when he is the assailant, and when he incautiously departs from certain well-known rules, which, acted on judiciously, ought to safeguard him against any serious consequences. A nettle can sting most effectively; grasp it properly and it does not hurt.

Nature has, wisely and well, implanted a sting in the bee to act as a weapon of defence; and, on occasions, it can use this weapon most effectively in defending its hearth and home. Without such a protection, the race could not exist, and the bee as a species would soon become extinct, for then every beast, bird, and insect of superior strength would prey upon it, and rob it of its sweets as soon as gathered. Every time they took a flight these marauders would lessen their number, while creeping, crawling, and flying insects could, with impunity, make its home and treasures their prey, until the life of the community, from hateful foes within and dire foes without, would become a burden too heavy to bear.

Now, guarded as they and their luscious treasure are, by the weapons of several thousands of amazons — a regular serried phalanx of armed warriors—all ready and willing to sacrifice themselves on the altar of duty in defence of house and home, kith and kin, queen and hard won stores—other insects, even of superior strength, show a due regard to *meum* and *tuum*, *Nemo me impune lacessit* might be written over the entrance of

these Republican strongholds, each an impregnable fortress, for no enemy can expect to intrude on the sacred precincts, meddle with their rich treasures, or disarrange their internal organisation with impunity. Man, when he becomes a beekeeper, is the first to see and admire the beauty and utility of this admirable arrangement, which perfects and completes the order and harmony of these children of nature—showing that bee-law is framed with the best and wisest design so that their arrangement like that of all things created must be declared to be "very good." And yet the marvel of it all is that the bee-keeper finds the wrath of the bee is almost a matter of fiction. We know from hearsay or observation that she has a sting, and, perhaps, have a lively recollection of suffering from her anger (or shall I say her sense of justice) in our novitiate days. These are but reminiscences; but why the change? *Now* we can handle bees with impunity, having learned wisdom from experience—for experience teaches even fools. We have discovered that there is a right and a wrong way of handling them, and, consequently, we have acquired a steadiness of nerve. This secures us a confidence, which again engenders gentleness in manipulating them, which finally begets gentleness on their part, and a species of reciprocity all round. Of the bee's stinging powers and some *comments* on my "Comments" I will have something more to say at an early date.

"*A Merry Christmas!*"—The present issue falling, as it does, on December 25, enables me, appropriately, to wish all brother and sister bee-keepers the Compliments of the Season. In regard to the year now in its last throes, I would express the wish that this day week may "Ring out the *false*; ring in the *true*." For the fast passing year has been the most disastrous since the advent of modern apiculture. It has been the worst for over fifty years, I am told. May it be more than other fifty before we have such another!—D. M. M., *Banff.*

BACILLUS ALVEI.

IS IT THE BACILLUS MESENTERICUS VULGARIS?

[4986.] The so-called foul brood in bees was first discovered under that name by Schirach in 1769, but it is supposed that so far back as Aristotle it was a recognised disease. It was in 1885 that Messrs. Watson Cheyne, and Cheshire submitted this destructive disease to an elaborate scientific investigation, and shortly after presented to the scientific world a certain *Bacillus alvei* which was accepted as the *fons et origo* of the foul brood in bees. The latest contribution to the scientific work on the subject emanates from the University of Liége, and the funds for carrying it on were provided by the Belgian Government. Dr. Lambotte, as the result of his extended researches, affirms that the *Bacillus alvei* of Cheyne and Cheshire is identical with the well-known and widely-distributed *Bacillus mesentericus vulgaris*, and must be placed in the same category with, for example, the *Bacillus coli communis*, which, although a normal and harmless inhabitant of the intestine, may under given conditions become pathogenic and give rise to disease.

The endowment of harmless micro-organisms by suitable means with pathogenic properties is, of course, a well recognised achievement, and Dr. Lambotte has shown experimentally how the familiar potato bacillus may artificially become infested with disease-producing powers and can engender foul brood disease in bees.

I have gleaned the above from *Nature* for October 23 on account of its great importance to bee-keepers generally.

Although Dr. Lambotte's research shows *Bacillus alvei* to be identical with *Bacillus mesentericus vulgaris*, and I have no reason to doubt it, yet, for the sake of certainty, I must say I should like to see this confirmed. The practical experiments seem to leave no doubt, and yet at the same time it is difficult to connect certain links in one's experience. In Barbados, for instance, where I am staying at the present time, no foul brood is known, and from the state of the bees, they are exceedingly healthy. Yet it is hardly to be disputed that in such a densely-populated place as this, under prevailing conditions, known only to those who live in the Island, that *B. mesentericus vulgaris* and others must exist abundantly. Why have the bees never contracted the disease?

I do not presume to set my opinion against that of Dr. Lambotte, I only desire to place on record a thought which has occurred to me. — R. Hamlyn-Harris, D.Sc., F.R.M.S., F.Z.S., F.E.S., &c., *Newham, Belleville, Barbados, West Indies, December* 4.

SHOWS AND SHOWING.

[4987.] As a practical bee-keeper of over twenty years' experience, I trust I may be permitted to make a few remarks with reference to Shows. The unseemly wranglings and petulant objections of some who profess to be interested in apiculture has done and is doing much to disgust not a few who, from the highest view and not from any feeling of self-interest, are anxious that bee-shows should everywhere be encouraged. Some time ago, at much trouble and some personal expense, I organised, at a flower show, an exhibition of bees and of bee-produce. The exhibition was pronounced by every one to be a conspicuous success. But alas for the show and the exhibition, a disagreeably contentious element was introduced, which so displeased the resident and neighbouring gentry that on the following year all the leading people refused to have anything to do with the show, with the result that it fell through, and I

determined never again in that district to make any attempt to teach the people how to keep bees. This is only a sample of the result of the conduct of those who so stupidly make themselves disagreeable to those who are anxious to encourage local shows and exhibitions. There are some who, if they cannot have everything their own way, would kill a show. Conspicuous among these I cannot help thinking is Mr. Woodley. He seems to live upon objections. His remarks with reference to "trophies" could never be made by one who was by nature and not profession a bee-keeper. For instance, "in my opinion," he says (I should think in this matter he enjoys sweet isolation), "no *English honey* has ever been used in" the manufacture of such things "as cosmetics, soaps, hair-restorers, and such like" articles. What a confession! The horizon of Mr. Woodley's knowledge is manifestly a very near one. With sublime innocence he fails to realise that possibly there may be uses for bee-produce of which he has never heard or conceived. An ounce of knowledge is worth a pound of "opinion." I know for a fact that honey is used in the manufacture of many of these articles to which Mr. Woodley takes exception; indeed, it is used in many articles which as yet have not appeared in the "Trophy Classes," and so there is room for improvement in the exhibits in these classes.

I do earnestly hope, Sirs, that you will use your influence to discourage those who by repeatedly raising objections are doing much to retard the success of bee-shows and to disgust educated people.—(Rev.) DONALD MOORE, *Clifton, December* 12.

CREATING A HONEY MARKET.

SELLING THE YEAR ROUND.

[4988.] So far as can be gathered from the BEE JOURNAL pages there has been no trouble about selling honey this year; indeed, with most bee-keepers the difficulty has been to get saleable honey. We must, however, be looking ahead, for the first good season will doubtless bring forth the usual wail of "over-production" and "bad prices."

Most goods in the grocery line are handled at a very low rate of profit, but somehow this does not seem to apply to honey, seeing that the average retailer generally looks to clear up to 50 per cent. profit on its sale. Bee-keepers themselves are, I think, largely to blame for this; for, although a shop may at the time already be overstocked, they will persist in forcing sales as if glad to part with their honey at any price they may be offered for it. The grocer holds the honey for a while, and then sells out at a handsome profit, while the beeman raises the cry of "bees don't pay," thereby damping the enthusiasm of would-be beginners. Surely there should be some simple remedy for this state of affairs? According to my experience, the present tendency in the provision trade is, that as far as possible everything should be supplied direct from the producer to the consumer. At least, this is what must be meant when in the shops we see goods marked as being "from our own factories" or "direct from our own farms," &c., and thus the public is continually being taught to believe that it is to their advantage to deal with firms trading on such lines. And I contend that bee-keepers can learn something from this. There seem to be plenty of bee-men all over the country who, whether through being better situated or more enterprising than others, have worked up a good connection with private customers, and these fortunate ones are usually "sold out" at a good price, by the end of October, and, in due course, mention the the fact in a letter to the B.B.J. This is all very well so far as it goes, but having done so well could they not do better still? It can hardly be the case that their customers use honey only in the fall. In other words I ask, would they not, if it was offered to them, buy honey all the year round? If my question is answered in the affirmative I then go further and say: Let these successful beemen get in touch with their less fortunate brethren; those who complain that they can find no market for the honey they produce. The latter would no doubt agree that a fair commission should be charged on all sales; customers would be regularly supplied, and large quantities of honey disposed of by bee-keepers in this way to their mutual benefit, and to the benefit of the British bee-keeping in general.

The cry of "over-production," is idle and mischievous. The only way of increasing the demand is to increase the supply; by restricting the output we merely play into the hands of the foreigner. But if bee-craft is to be set on a firm commercial basis, beekeepers will have to stop the unbusinesslike practice of forcing their honey on the market at any price it will fetch as soon as removed from the hives. What would be thought of farmers if they did the same with their crop when harvested? To sum the matter up it seems to me that there is plenty of room for more honey producers, but if it is to take its place as a common article of food, honey must, like other foodstuffs, be supplied regularly, and kept prominently before the public every year and all the year round.—J. M. E., *Ussie Valley, Cononbridge.*

FOUNDATION FIXING, &c.

[4989.] Mr. S. P. S.'s (Rochford) (4976) remarks as to the "old and time-wasting way of using melted wax" for fixing foundation in frames have led me to state my experience in this line.

This "waxing" method has been my way of fixing foundation annually now for the past eighteen years for an apiary averaging fifteen

hives. I was, however, rather surprised to see Mr. Herrod (4966) uses the same method. I should have expected such an up-to-date expert to have discarded such a method long ago. [The "Mr. Herrod" you refer is not Mr. W. Herrod the B.B.K.A.'s expert, but his brother, Mr. J. Herrod.—EDS.] During my eighteen years' bee-keeping I have fitted hundreds of frames with foundation, and have become possessed of a few dozens of Abbott's split-top frames. These I originally fixed in the usual way with the saw-cut, but in renewing the foundation they have invariably been done with molten wax, which is the best plan I have yet seen. One great dislike I have to the cut top bar is the difficulty of thoroughly cleaning the frame. I am unfortunately in a district not quite free from foul brood; consequently, when old combs want renewing it becomes necessary to clean the frames, and this I always do by baking them, or, rather, roasting them, over a red-hot fire; and the ones with the saw-cut, or grooves, are most difficult to clean; the plain ones scrape easily, and are as sound and good as new. As to time taken in fixing foundation, I think I could keep pace with any one with their cut-top-bar method. There certainly is the trouble of making the wax hot, and it is looked upon as a messy job, but that is really more fancy than a reality. One thing I have particularly noticed *re* fixing foundation is the number of complaints of foundation dropping out of the frames when put into the hives. This is a thing I have never experienced, although I never wire any frames.

As to the size of our "Standard" frame, to depart from that now would be disastrous to the bee-keeping industry, a somewhat thicker top bar might be an improvement, although my own experience says the (full) three-eighths solid top is quite sufficient for all purposes, and is cheaper than the cut-top ones, and this is one of the most important things to study in bee-keeping.—H. NEVE, *Heathfield, Sussex, December* 15.

THE "TROPHY CLASS" AT SHOWS.

[4990.] I see in Mr. Woodley's "Notes by the Way" in your issue of December 4 (page 482) he makes a pointed reference to the Trophy Class at Shows, and after enumerating certain things, says "No English honey has ever in my opinion been used in the manufacture of any of these articles." If, as I suppose, he is alluding to my trophy at the Confectioners' and Bakers' Exhibition last September, he is mistaken. Everything exhibited by me was made with pure English honey or wax. It would be a pity if the Show Committees in drawing up next year's schedules were to "bar" any items which are of practical use and for which honey or beeswax is required. There is no better floor-polish or furniture cream than that made with beeswax, and the value of honey for its medicinal properties has always been acknowledged. In the making of gargles and cough-mixtures honey is frequently used, as in many other things, and I know by experience that honey for the cure and relief of asthma is invaluable.

In former days the basis of almost all salves and ointments was clarified beeswax, and it is still considerably used in the making of these, which, I think, Mr. Woodley refers to as "cosmetics."

I possess a very old recipe book (1815), and it is surprising what a number of domestic remedies were in use in those days which contained honey. Though they knew less then about beekeeping and management, they appear to have known infinitely more about the uses of honey.—L. WALLER, *Pen Park, near Bristol, December* 13.

FOUL BROOD AND BEE-FOOD.

[4991.] I was very pleased to see in the B.B.J. of December 4 (page 489) the "Good Advice to Bee-keepers," by one so competent as Colonel Walker. I quite endorse his view that it is the duty of every bee-keeper to do his utmost to cleanse his apiary from foul brood, or, if not actually infected, to use every means in order to prevent infection.

I am frequently asked by neighbouring cottagers to look at their bees or to harvest their honey in autumn, and sometimes I got the "driven bees" for my trouble. But soon found out the danger of accepting the latter, for before I learned to fully understand the nature of foul brood, I carried home with me the germs of the disease to my own apiary. I may say this pest is the only thing I fear in bee-keeping, and when I had to destroy one of my best stocks I resolved never again to accept driven bees from my neighbours. However, by promptness and energy, I got rid of the contagion, and, although surrounded as I am by careless neighbours, when the expert of the Devon B.K.A. examined my hives, he said: "Your bees are in a splendid condition; I never expected to find stocks here so strong and healthy as yours." I may say, however, it is only by the exercise of constant care that bees can be kept free from disease if it exists in a district, when you are exposed to the carelessness or ignorance of cottager bee-keepers, who know nothing or care nothing about risk to others. It is so difficult to make them understand the true nature of foul brood.

I could narrate many instances of the arduous labour I underwent in trying to clear out foul brood from the apiaries of cottager skeppists and farmers who kept bees, but know little about them. I only know it was very discouraging often to find one's advice with regard to treatment quite disregarded. The details might be useful, but would occupy too much space.

It seems impossible to suggest an efficacious

means of dealing successfully with bee-keepers so wilfully careless of others' welfare as many I have come across. In fact, nothing short of compulsory legal powers could be successful with them, but it shows how true are Colonel Walker's words :—"Any one who is not prepared to look after his own bees and keep them healthy had far better not keep bees at all." Every one admits how much there is still to be done in curing foul brood in this country. But I am persuaded that if bee-keepers would unite in a common effort in that direction, the progress would be rapid. Everything depends on our bees being kept healthy and strong, and among the means of securing this end the most important is good and wholesome food. I am in accord with the most competent authorities in saying this. All the reliable text-books recommend first quality bee food, while eminent German bee-keepers especially insist on that point. No less an authority than Gravenhorst, in reference to feeding, says :—"To the question, with what shall we feed our bees ?' I reply, with good and carefully gathered honey.' By this I understand :—(1) Honey taken from healthy stocks ; (2) taken from sealed combs only ; (3) honey harvested and preserved with the greatest care. Honey from sealed combs only is "good" for feeding, because only such is in properly wholesome condition. It should never contain dead bees or brood, or be spoiled in any way. But if bee-keepers use honey at all for bee-food they usually buy the cheapest rather than the best. This, however, is poor economy, seeing that winter food for the bees is of far greater importance to the well-doing of the colony than the hive and its accessories. Honey dew and that gathered from fir trees should be removed from hive without delay. Food made from cane sugar is better than doubtful honey. In spring we should be careful to feed only with granulated honey of a buttery consistence, in order that the bees may take it slowly, and not cause robbery."

When Gravenhorst wrote these lines he did not know bee-candy as it is made now. Had he done so, no doubt he would have recognised its advantages over granulated honey. Herr Gravenhorst goes on to say "as domestic animals yield the greatest profit when they receive good and abundant nourishment, so it is with bees. Indeed, the latter require still greater care than others on account of their delicate construction." This is the opinion of Gravenhorst about food and feeding, and being impressed by the great care German bee-keepers bestow on bee-food, I resolved to try and find out the best kind of food for winter and spring feeding, and which would at the same time help to destroy "foul brood," and when I say that I have succeeded in keeping my bees strong and free from disease amid unfavourable surroundings, it is near the right thing, so far as maintaining the vital forces of the bees. I sent samples of this kind of candy to our Editors, who pronounced it a "*very good* sample." Bee-candy, to be "good," must be soft and smooth in grain, like the fondant sugars made by confectioners. I prefer properly-made candy to either honey or syrup-food for any season. It never induces "robbing," nor does it excite the bees, while, if properly made, it has all the good qualities of syrup without the inconveniences of the latter. Syrup-food, if given abundantly, causes a lot of watery stuff to be put in the combs which has to be evaporated in the hive itself, and this at a season when the outside temperature is damp and cold. Then in the hands of beginners or careless persons extensive syrup-feeding starts robbing, which, as we all know, is so difficult to stop.

I insist strongly on the point that if we want it to be profitable to our bees and to help us to destroy foul brood, candy must not only be made with the best raw material, but it must also be smooth in grain, just as the "Guide Book" prescribes. For if it is rough and sandy in grain, or too hard, it will be of very little use to the bees, and in many cases will be hurtful to them. Therefore, let all bee-keepers use only first quality bee-food, medicated against foul brood, and we will see this terrible pest, which weighs so heavily upon us, visibly disappear.

In conclusion, I admit that syrup-feeding at the proper season and in the hands of skilful bee-masters, has some advantages over candy, viz., for rapid feeding. But how many are skilful and careful?—B. COLOMBAN, O.S.B., *St. Mary's Abbey, Buckfastleigh, Devon.*

THE BOGIE MAN.

CURING VICIOUS BEES.

[4992.] Your correspondent "D. M. M." has some "Comments" on page 434 of B.J. for October 30 on bee-stings and "Bogie" men, which brings Mr. J. Herrod on the scene (4966, page 486) with the assurance that he "has had scores of stings dotted all over his clothing." It is not the first time the "Bogie" man has made his appearance in the pages of the B.B.J. It has frequently proved most beneficial, and I fancy has had your recommendation. Now "D. M. M." himself is ready to admit that when placed in close proximity to a vicious hive it may do some good. I conclude from this that our friend's object is to cast some doubt upon the truthfulness of Mr. Sole, who first wrote on the subject in your pages as long ago as August 21 (4867, page 333). In other words, while questioning the veracity of Mr. Sole, he seems to me to cover his own want of knowledge as to fact. He says "A bee, even in passion, does not evince a blind fury in its action." I may assure him that it often does. Let him isolate a bad-tempered stock of bees, and not allow it to be visited for a few months. He will meet with ample demonstration, and

his theory of any other than the "vulnerable part of a man" is at variance with fact. If after such a visit he will examine for himself he will find many stings conspicuous in the hat, coat, and vest, where the ligaments and honey sac show white flecks. I am a bee-keeper of observation and experience, and can assure our Scotch friend that a bee struck when circling round its own hive will, in blind fury, sting anything that moves. I have seen it, and I have seen one bee, after having lost its sting, raise a tumult in a hive, and set it in a regular commotion. Bees are cautious as a rule. The "fury" is the exception. A bee with its sting sticking in your hat is, unwittingly, as dangerous as one with its sting carefully stowed away. I can tell our friend, too, that when a bee has left its sting in your hat it makes as much fuss as if it had already got a new one, and will then become a cautious bee by experience. I have caught such in my hand when they have been so deeply intent on getting into my eyes.—TOM ABBOTT, *Cheshire, December* 9.

[We have omitted some further criticism of Mr. J. Herrod's letter with special reference to experts and foul brood, as it seems to us that our correspondent is confusing the writer of 4966)page 486) with the well-known expert and apiarist of the B.B.K.A., Mr. W. Herrod, whereas Mr. J. Herrod is a younger brother of his.—EDS.]

WANTED, A FRAME.

[4993] Yes, along with other bee-keepers, I want a frame, but that is not all; a good many of us want "Quaker Oats" boxes, a saw, a small plane, a gimlet, a few screws and nails, and a pair of willing hands, and you will soon have a useful hive 22 in. long to hold "standard" frames. The super will be same size as the brood-chamber, a nice roof to keep the wet out, a floorboard of the same wood, and there you are! This is called by Mr. H. Edwards "a nasty frame" in a "nasty hive," which hive will cost you 3s. This price is one that suits a bee-keeper who is a mechanic. As for its being "nasty," that is a matter of opinion, I take it, but for the result I asked a friend, another mechanic, to come and see me take the honey this year, and he watched me take 50 lb. of beautiful honey out of this "nasty" hive. Therefore, I hold that I am on the right track. I have known the little labourers we call "the bees" since 1857, and I can give them a good character now. Now, friend Edwards, will you set to work and teach our country labouring men how they can make a better cheap hive in the winter evenings than the one I have mentioned? When you do, and when foul brood comes, we will all be indebted to you; but meantime I am satisfied with one of these nasty hives, so long as they give me 50 lb. of honey; and the cost of another will be just a fraction below 3s. Any one can look after a few bees, if they have the money to buy all the appliances you advocate; but here you can go through miles of bee-country and not a hive to be seen. It is these men who have only from 12s. to 18s. per week wages that I am trying to "bring into line." The only "swarm-catcher" I need is myself. I mean to say that bees will do well in one of these "nasty" hives, but I call them cheap and "nice," and I say to any labouring man, do not spend any money on hives, but read the little BEE JOURNAL as often as you can, and you will see week after week what to do. If in any fix or difficulty, ask the Editor a question or two now and again, and he will set you straight. In conclusion, I wish all friends of the bees better luck next year. —BASSWOOD, *Swindon, Wilts.*

Queries and Replies.

[3011.] *Keeping Honey in Lard Buckets.*—I recently had 40 lb. of honey stored in a lard bucket, which latter was placed in a copper of hot water to melt the honey, so that I could run it into jars. I enclose sample, and you will find that it now tastes strongly of lard and wood. Will you therefore please say if you know of any process which would put this into a proper condition for sale, and, if not, would it do for feeding bees?—ATLAS, *Cheshire, December* 12.

REPLY.—We regret to say honey is utterly spoiled for sale purposes or table use by the admixture of lard and strong flavour of the latter in sample sent. It may do no harm to feed bees with it, and this is the best use we can recommend its being put to.

Notices to Correspondents & Inquirers.

A. S. (Keston, Kent).—*Queen Cast out in December.*—1. The dead queen sent is a nicely marked Italian. 2. We should say it is not the laying queen of the colony, being very young, and bearing all the appearance of a non-mated queen. 3. With regard to its being the only queen at head of the colony, this is a point requiring inspection of combs before a decision can be arrived at. You should take first chance of a warm day, when bees are flying, to have a search on combs for queen. 4. We cannot give cause of death.

"PROSPECT" (Castle Cary).—*Bee Candy.*—The candy sent is utterly unfit for use as bee-food. You must adhere closely to instructions in "Guide Book," and neither use tartaric acid in mistake for cream of tartar, nor use raw Barbados sugar instead of refined crystals or loaf sugar. Your sample is simply a soft brown paste that would not hold together, but run down among the combs and cause all sorts of mischief to the bees.